Remarks ON MODERN LITHOTRITY.

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(*Concluded from page 536.*)

WITHIN three years renewed attention has been given to the lithotrite, which was supposed to be beyond improvement. A calculus may indeed be crushed by any lithotrite, if strong enough. But since decisive crushing has become more desirable, and the limit to the size of the stone has been extended, different lithotrites are more and more used for different stones. The old lithotrite, the combined work of Retoré, Costello, Charrière, and Weiss, underwent little change in half a century. A most convenient addition to it is the long handle described by Thompson.[1] It gives a better hold for the left hand. But the inconvenient button in the lock of Weiss, which it encloses, has never been changed. The thumb and the eye of the operator must search for it when the instrument is turned. By changing the lock a little I have been able to replace this button by a more convenient ring, which the fingers cannot miss (Fig. 12).

FIG. 12. FIG. 13. FIG. 14.

Fig. 12.—A lithotrite in which a ring is substituted for Weiss's button to operate the lock.
Figs. 13 and 14.—Author's lithotrite, having a male blade or right-hand lock, which is closed by a quarter revolution of the lock cover held between the thumb and forefinger of the operator's right hand. It also has an elongated vulcanite handle shaped to fit the hand.

To reach this ring-lock with the fingers, after the stone is seized, requires neither practice nor attention, while one or both are needed with the Weiss's button.

The easiest movement of the right forearm or hand is rotation from left to right—supination. I have adapted the locking of my lithotrite to this motion.[2] An instrument which can be thus locked and unlocked has this superiority, that not even the fingers of either hand relax their grasp until the stone has been screwed down between the blades. No other lithotrite gives the surgeon this advantage. This lock is attached to the usual American instrument, and I have lately further improved it (Figs. 13 and 14).

We may laboriously educate the movements of the hand to the piano, the violin, or some especial lithotrite, but we cannot alter them. That instrument is the most convenient which, in accomplishing its object, is best adjusted to the easiest movements of the hand. Workmen may become, indeed, proficient in the use of any form of instrument; but the skill of the Japanese wood or metal worker, which is unrivalled, is not evidence of the convenience of his tools, which are rude.

In THE LANCET of Nov. 2nd, 1878, p. 616, I pointed out the advantages of certain lesser modifications of the usually accepted lithotrite, partly new and partly not. Among these were, besides the increased calibre of the jaws, a large opening at the heel of the female blade, into which the flanges of the male blade projected so as to drive out the débris and prevent impaction where it is likely to be greatest; jaws as much at right angles with the stem as can be safely introduced, whereby their efficacy is increased; a thicker toe to the female blade, elongated to prevent the bladder from being seized by the closing blades, and well rounded off to facilitate its introduction; a ball or larger wheel or handle, instead of the classical narrow wheel of Civiale, which had been retained for half a century, although it excoriates the hand. (See Figs. 13, 14, 15, 16.) The adoption of all these changes in the most common American lithotrite, and their recent valuable endorsement, in his later instrument, by so skilful a lithotritist as Sir H. Thompson, show their value.

Before choosing the instruments for an operation, I measure both the urethra and the stone. But the limit to the size of instruments is not merely mechanical. It is also related to the fact that the membranous urethra is peculiarly intolerant of injury.

The healthy urethra, according to Otis, has a calibre of 32 French, the meatus being about 24. I generally use a catheter about 29 French (18 English), but also smaller sizes, which are often more comfortable to the unetherised patient, and, in a diseased subject, safer. With 25 or 26 you can produce the click of a last fragment or a small calculus, and easily deliver it when crushed. In fact, much of the débris of a stone is in the form of dust, and what is not can be further comminuted.

But when the stone is not a small one, and the urethra is of normal capacity, I use the size 29 or 30, or even 31—as large as the urethra will comfortably admit, not larger. The advantage in doing so is that the smaller fragments need not be crushed again.

Strong lithotrites are now in general use for large and hard stones. I like a large lithotrite on account of its powerful, rapid, and efficient action, but it by no means follows that it is essential to use a large instrument to break a small stone. Any small lithotrite answers for small stones. The average stone of these days is small. I always crush a last fragment with a small instrument. A large stone once broken can obviously be treated by an instrument of less size; but once in the bladder, I think the surgeon will generally continue to use the instrument with which he has successfully begun the crushing.

A calculus out of the bladder would be crushed best by a colossal instrument at a single grasp. It is the necessity of safely introducing and withdrawing the instrument that determines the size of its blades. The length has most to do with their introduction, the calibre at the heel with their withdrawal through the prostatic and membranous urethra.

Length of the blades.—While long blades slide easily from the meatus as far as the triangular ligament, the delicacy and skill of a practised operator are needed at this part of the passage. On the other hand, once safely in a bladder of fair size, a long blade has a positive advantage in seizing and crushing the stone. The instrument can be readily turned down either way upon the oval floor, especially if the handle be inclined a little to the side towards which the blades are turned. Behind the perpendicular wall of a high

[1] Practical Lithotomy and Lithotrity. London, 1863, p. 157.

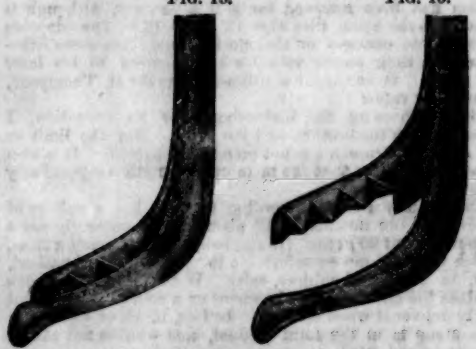
[2] This was accomplished by making the usual guides, which prevent the screw from rattling against the sides of the lock, also turn and close it, by the action of the right hand upon the male blade. I have called it the *male blade lock*.

prostate, short and blunted blades, which can be inverted readily, are the most convenient.

The calibre of the blades is a question by itself. Blades may safely be large at the heel, which is the largest part, if they do not become clogged with débris, and, by their increased size, endanger the neck of the bladder while being withdrawn. If they cannot be cleared of débris they should be small. Fergusson's method of removing débris with the lithotrite is not now generally in use. No lithotrite that can be cleared is drawn out loaded. It is almost universally agreed that fragments can be removed better through a catheter than in a lithotrite. This fact has led to renewed search for a lithotrite that can be completely emptied and closed before withdrawal, without danger of impaction. It can then be made stronger and larger—at least as large as a smaller lithotrite when it is full of débris, or of the evacuating catheter (26 to 29 French) that is used at the same time—and as it does not need to be repeatedly withdrawn to be emptied, crushing can be continued as long as it is desirable.

The dust of certain stones mixed with mucus clogs the lithotrite, especially at the heel, with a very hard composition. To prevent this, I have recommended a high floor at this part, or, what is the same thing, low sides, in the female blade; and in the male blade, lateral notches steep enough to push off the débris laterally (Figs. 15 and 16). This plan has been adopted in the more common American instrument. I also think well of the fenestrated lithotrite in practised hands. An instrument of this kind will comminute the

FIG. 15. FIG. 16.



Blades of the author's lithotrite. The notches, as here represented, are intended to be deep and steep enough to ensure the blades against the usual impaction in front. At the heel, where clogging is always worst, the débris, divided by the spur of the male blade, falls off on each side from the high floor of the female blade. The female blade has a long blunted toe, curved forward. The size of the heel is 26 French.

stone, especially a hard one, sufficiently to pass the catheters. When lithotritists, three years ago, were warning each other against the danger of fatal cystitis, which had been attested, as they supposed, by the experience of half a century, my first precaution while making experiments was to protect the floor of the bladder by a solid female blade. A projecting splinter of stone, firmly set in the fenestra of an open female blade, while being crowded through it, is obviously a dangerous weapon. The blades should always be lifted off the floor as soon as the fragment is secured, before crushing it. But it is a great relief to the hand of the operator if the blades shut, at the last moment, quietly together. The old fenestrated instrument can be made to crush as well as cut the stone by widening the female blade and sharpening its rim inside so as to retain it (Fig. 17). This also protects the bladder from any scissors-like action of the edges. The sole of the male blade is grooved lengthwise, and serrated. In order to widen the hold upon the stone in another way, and occupy less room in the urethra, I have used a zigzag, fenestrated blade which has proved quite efficient (Fig. 18). I have employed a fenestrated instrument with great success upon a hard stone, which it crushes and does not so much slice as it does a soft stone. Dr. Keyes first advocated the use of the fenestrated instrument to avoid impaction in the long sitting.

The toe of the female blade should be not only long, and rounded, so that it shall not injure the upper wall of the prostatic urethra as it moves along, but I have also curved it forward. Its added length, besides protecting the bladder, then makes the passage easier (Figs. 15, 16, 17, 18, and 19).

I may add a word about lithotrites. Mine are of several sizes, and of two sorts—the solid and the fenestrated. The latter, of course, cannot clog, and has been sufficiently described. Of the former it may be further said that it does not clog, the notches in the male blade being steep enough to deliver the detritus at the side. It is absolutely essential that the notches be deep and well slanted. This implies a thick male blade, to which I have no objection. The crushing is chiefly done at the front of the blades, where, so far as I know, every other lithotrite with solid blades clogs. The heel, which never crushes advantageously,

FIG. 17. FIG. 18.

Fig. 17.—Fenestrated instrument, with a wide floor and high rim to hold the stone while being crushed. The toe is long and curved.
Fig. 18.—Fenestrated instrument, with blades curved laterally to widen the grasp upon the calculus. The toe is also curved.

has here a long narrow fenestra, cleared by a projecting metal plate which passes through it. This divides the débris, one-half of which falls off at each side from the high floor, and effectually hinders clogging where it is always worst. These lithotrites have the male blade lock and long vulcanite handle figured in the previous page. The blades represented in Figs. 15 and 16 are of the middle size. They measure at the largest part of the heel 26 French. The stem of the instrument is small, and moves freely in the urethra, but it communicates great power to the blades, which are strong, and adapted to general use.

A straight catheter, which I think evacuates best, generally passes with great ease. Sometimes a curved catheter passes

FIG. 19.

Diagram intended to show how the curved and blunted toe protects the roof of the membranous urethra, and also that the blades in passing, occupy no more room than without it. The position of the instrument here represented is the proper one at this part of the urethra. The dotted line shows that the curve is the result of removing superfluous metal from the sole of a blunted blade.

better, and now and then the urethra is capricious about receiving any instrument. In passing an instrument, after dividing the meatus if necessary, or divulsing a stricture, we reach at once the triangular ligament, where the chief difficulty of the passage lies. Here the instrument should be insinuated with a light hand, not by depressing the handle in a quarter circle as if it were a catheter, still less by force, but the aperture should be carefully sought for. Beginners are very apt to strike above it. To avoid this mistake, after the instrument has been passed vertically down *quite as far as it will go*, it should be withdrawn a little before being pushed forward, and this manœuvre repeated till the point drops through the ligament. A student may quickly acquire great skill in passing an instrument in the living urethra, by practice upon the dead subject, if he will twist a common tin

sound into irregular angles and curves, and pass first one end and then the other through this opening. The ligamentous orifice is really the turning point in the successful passage of an instrument. Once safely beyond it, a catheter, if straight, can be rotated horizontally through the prostatic urethra. But a curved catheter, or a lithotrite, should be lowered only to an angle of about 45° with the horizon, if the patient is on his back, and then urged carefully forward like a boat in the water upon an even keel. The floor of the canal is depressed by the heel of the instrument as it slides along, and this relieves its roof from the pressure of the toe (Fig. 19).

I usually search for a stone with a common tin sound bent extemporaneously to suit the case, and measure it with a lithotrite, which also makes an excellent sound. The search for a last fragment or a minute calculus is best done with a small evacuating-catheter by which the fragment can escape, or, if too large to pass, is arrested with an audible click. A trap and bulb are attached to it. (See Fig. 3.) In these days fragments are made to seek the sound rather than the sound the fragments, as has been the case heretofore. I think that the old method of sounding for a small calculus is generally abandoned, unless the calculous material is adherent or otherwise immovable.

Evacuation is a simple thing, and is usually successful, even with an imperfect evacuator. To secure the water I tie an elastic band around the penis after the catheter is in place, and judge of the distension of the bladder by ascertaining, from time to time, the tension of the urethra behind it. The pumping is an easy continuous movement. There is no need of pausing after the stroke, which may be as rhythmical as the swing of a pendulum. If any pause is made, it is after compressing the bulb, to let the débris settle, when there are few left. Every fragment, sooner or later, finds the catheter, most of them at once, and with surprising readiness. The most advantageous spot, higher at first, lower when fragments become fewer, is soon discovered by trial. A quarter of an inch higher or lower sometimes makes an unexpected difference. When the fragments cease to fall into the receiver, the catheter may be immediately withdrawn. But I often add to the evacuation a thorough sounding in pursuit of a possible last fragment, which perhaps does not exist, and thereby make the operation much longer. This search can be deferred if the condition of the patient makes it desirable, although I do not think it more important to abbreviate this surgical operation than any other. Without this prolonged attempt at complete evacuation, verified by a final careful sounding, evacuation is usually a short matter; and the number of grains evacuated in a unit of time, say in a minute, is large.

Let me illustrate with a single case how the catheter may be obstructed. A patient was relieved three years ago by lithotomy of about a gill and a half of stones of the uniform size of small marbles. A month ago I operated upon him by crushing. The operation occupied two and a half hours, and was tedious in the extreme. Neither the lithotrite nor the evacuator performed as usual. Afterwards it was clear that the crushing was slow, because I could never seize a piece larger than a marble; and evacuation was next to impossible, because the catheter was constantly obstructed by a similar marble. The patient did well. He was seventy-two years old. The quantity removed was nearly 900 grains.

Among diseases that obviously reduce the chances of a patient, surgical kidney, upon which Sir Henry Thompson has laid much stress, is perhaps the most common and most fatal complication of any operation for stone. Its symptoms have been of late so accurately defined by Professor Guyon and his disciple, Dr. Bazy, that perhaps the most important single question to be solved, if possible, before operating, is whether the patient has surgical kidney or not.

I adopt no special preparatory treatment. If necessary, immediately before the operation, I enlarge the meatus or divulse a stricture. Rest after a journey, the relief of some obviously aggravated and temporary symptom, the antiseptic or other washing of the bladder when desirable,—all this belongs to the common principles and common practice of surgery.

After the operation, opiates and warm fomentations are often comforting, and sometimes essential. The bladder should be left empty, and as far as possible kept so. Where complete retention is probable, and it is always possible, the patient should be within reach of the surgeon. The bladder may be washed out with water, or mild antiseptic fluid, if the character of the urine suggests it. One of the most troublesome complications is a mass of mucus that creates tenesmus, and will not pass through the catheter.

I have been cognisant of four fatal cases in which the deep urethra, which is less tolerant of injury than is the bladder, was lacerated. Such cases do not count against lithotrity, but show the need of habit as well as care in passing and withdrawing the instruments, especially the larger sizes. These in the hands of the general surgeon are less safe than the smaller ones. Within the bladder the entire wall can hardly be caught with impunity in the forceps-like extremities of the old lithotrite, though strips of mucous membrane have been torn from it without serious consequences.

I think I am justified in assuming it to have been demonstrated that where lithotrity has hitherto been the accepted rule of practice, as in the case of a healthy patient or a small stone, the new method is better than the old one, and that the domain of lithotrity has been notably extended. I think we need no further statistics relating to small stones.

The question still remaining concerns lithotomy and its indications. It is whether modern lithotrity is not better than lithotomy in that class of cases hitherto claimed by lithotomy, comprising larger stones and surgical kidneys, conditions which are distinctly unfavourable to any operation at all. It will take time to decide this point. The practised surgeon may even find it so difficult to rid himself of a merely traditionary preference for lithotomy that the verdict may be unnecessarily delayed. But even when lithotomy is successful I ask myself if the patient would not have encountered a less risk with the new lithotrity? I do not know any new indications that enable us to decide peremptorily when lithotomy is better than lithotrity. The latter does not, it is true, so completely drain and rest the bladder. In the case of a large stone it is, perhaps, likely to be done less skilfully than the operation of lithotomy by the general surgeon. But there is no danger of secondary hæmorrhage, nor is there a grave wound in a diseased prostate, communicating, perhaps, with a putrid catarrh of the urinary tract. As yet no disproportionately unfavourable results have set a limit to lithotrity for large calculi and diseased patients. On the contrary, its use is becoming more common. Extraordinary stones have been successfully removed by crushing.

I myself add to 21 cases I have published of promiscuous stones, large and small, 24 cases with one death. Of these I report here only 10 cases,—comprising 6 calculi weighing over 200 grains and under 500, 1 over 500 and under 700, and 3 over 700 and under 1000 grains. The single death was by septic infection, in a patient sixty-six years of age, having a phosphatic stone of 270 grains. There was no apparent injury of the canal or bladder sufficing to explain it. The only peculiarity of the case was an unusual vascularity of the urethra during the operation.

The manœuvres in a long sitting do not greatly differ from those in a short one. But they need more persistent care and patience, because the attention is rather apt to flag during the continued repetition of the same movements. The possession of a reflex skill, acquired by practice and acting without thought, as in swimming, bicycling, writing, or playing a musical instrument, is then of the greatest value. It ensures to the patient, as no mere good intention can, the advantage of what Cadge has called "all the little knacks and tricks which go to make up successful lithotrity." I think, with the improvements here shown, the operation becomes safer for the general surgeon. I often hear of successful operations upon large stones by the new method, in the hands of surgeons who have scarcely done lithotrity before, but I am satisfied that patients are yet safer in the hands of a surgeon who makes lithotrity in some measure a special study.

AT a late meeting of the members of the City Lands Committee, held at Guildhall, it was resolved unanimously, "That the best thanks of this committee be tendered, and are hereby given, to their chairman, Sydney Townsend Day, for his courtesy, assiduity, energy, and ability in relation to the recent conversazione to the International Medical Congress, thus largely contributing to its successful issue."

SEVERAL cases of illness resulting from eating poisonous fungi in mistake for mushrooms have been reported recently.

ON HOSPITALS:

THEIR MANAGEMENT, CONSTRUCTION, AND ARRANGEMENTS IN RELATION TO THE SUCCESSFUL TREATMENT OF DISEASE, WITH REMARKS ON THE ORGANISATION OF MEDICAL RELIEF IN THE METROPOLIS.

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CONVALESCENT HOSPITALS.

THE need of some healthy means of removing persons recovering from sickness in towns to places where they can entirely shake off the effects of disease, and return quickly to their ordinary vocations, without danger to themselves or to others, has long been acknowledged, and to some extent acted upon. The hospital day-room and garden are the first step in this desirable direction, and wherever practicable should never be overlooked in all plans of construction for such institutions. For the wealthy, and for those in moderately easy circumstances, many such exist; and there is now a cry for convalescent hotels, for which the existing conditions of active life seem to justify the necessity. The last move in this direction at Bournemouth is deserving of all support and success. But I am writing of the poor, for whom there is still greater need than for the rich, inasmuch as if they are allowed to return to their unhealthy abodes too soon, they are tolerably sure to relapse and die, whilst it is impossible to retain them in hospitals until complete recovery takes place, even if that be practicable in such places, of which there is more than sufficient doubt. For the poor, convalescent hospitals should be a compromise between a home and a hospital, with as much of the former as can fit easily into the latter.

An excellent example of what such a place should be exists at Cheadle, near Manchester. The late Mr. Robert Barnes, for many years one of the trustees of the Manchester Infirmary, a man of large views and well-directed benevolence, placed £26,000 at the disposal of the Infirmary Committee to build a Convalescent Home for those patients who could be removed to a healthy locality, to enable them to recover their health more speedily than was possible in the Infirmary itself. The outcome of this munificence has been a Convalescent Home at Cheadle in Cheshire, with accommodation for 140 patients, with a suitable staff of nurses. The building was designed and executed by Mr. Lawrence Burt, of Manchester, in conjunction with Dr. Reed, the then resident medical officer of the Infirmary, and a ground-plan and elevation of it was published in the *Architect* of Dec. 2nd, 1876. It consists of a number of small rooms with three beds in each, and four larger rooms, each containing six beds, with an abundance of space for cases that may relapse after removal. It has day rooms, a large dining-room and chapel, and all other accessory buildings—and, above and beyond all, a summer and winter garden, elegant in design, 100 by 61 feet in extent, and with a gallery on the first floor to accommodate those patients who are still too weak to get up and downstairs. It cost about £120 a bed, exclusive of site and furnishing, and stands on a large area of ground, originally of twenty-three acres, to which considerable additions have subsequently been made. Since its completion it has been largely and beneficially used in relieving the Infirmary for other cases besides convalescents.

I do not deem it necessary to describe any other institutions of the same class, for I know of no better model than that above-mentioned, at home or abroad.

COTTAGE HOSPITALS.

Cottage hospitals for country places are now accomplished facts; their necessity and usefulness have been acknowledged and established, and they have been so fully and carefully discussed, described, and illustrated in Mr. Burdett's recent work on the subject, as to need little more than their mere mention by me. The general principles to be observed in their construction and arrangements are the same as those which require to be considered in relation to larger institutions of similar character, modified to such extent only as the smaller numbers to whom they are applied demand. In some of those which I have seen there has been a somewhat too literal assimilation to a cottage, and a tendency to ornamentation which, however praiseworthy on æsthetic grounds, is not quite consistent with their healthiness and use. It must never be forgotten that however few in number are the sick placed under the same roof they need exceptional care in the regulation of the cleanliness, ventilation, conservancy, washing, cooking, clothing, and all other accessories of sick rooms; that the different rooms or wards should not intercommunicate with each other, so as practically to have one atmosphere common to all; that all kitchens and closets should be detached, and that arrangements should be made for the convalescent to be as much in the open air as possible, when the season and weather permit. Their relation to the working of the Poor-laws should also be carefully considered, for obvious reasons.

ALL OTHER SPECIAL HOSPITALS.

While it is necessary that what are at present considered to be more or less incurable diseases should not occupy beds in clinical and general hospitals to such extent as to cripple the resources of those institutions, and so far diminish their usefulness, they should not be entirely excluded from them.

As time goes on physiology and pathology extend their boundaries in ascertaining the causes, progress, and effects of disease, and art enables us to remove them, it is necessary that careful provision to a limited extent for their study should be made, at all events in hospitals devoted to medical instruction and scientific research.

When collected in special institutions devoted to cancer, consumption, and some forms of disease of the brain and nervous system, the hygienic arrangements of such places should be, as they usually are, of the most perfect description as regards essentials, which sanitary science has devised. All such cases require ample space, and some of them special mechanical and other contrivances, for the comfort and safety of the sick and afflicted. For the destitute and incurable poor, however, their best refuge is the workhouse infirmary; more carefully restricted in numbers than is sometimes at present the case.

As respects mental alienation in all forms which need restraint, and are more or less amenable to treatment, or which only require separation, as congenital idiocy and dementia, the various asylums in different parts of the country are monuments of the humanity and liberality of the nation in taking care of those who are irresponsible, and unable to take care of themselves. They are also specially cared for by the Legislature, in a manner of which some of the features might with advantage be applied to the general hospital system of the country. As special hospitals, they scarcely fall within the limits of my contention.

Neither do pay hospitals, which are now attracting much attention. In principle they differ from no others, and with them are liable to misuse if not wisely conducted, a question more of medical ethics than of medical practice.

I have not attempted to form any estimate of the comparative cost of different hospitals, because reliable materials of any value in the determination of the question do not exist. They are, however, very much wanted, and their compulsory production to a central authority, for the information of the public and for the prevention of abuse, is quite as much needed as in any other department of our social system, in which it is considered right for the State to interfere.

CONCLUSION.

From a careful consideration of the whole hospital question, imperfectly as I have been able to treat it in the compulsory limits of time and space, I have arrived at the following conclusions:—

First. That the general control and supervision of hospitals, in the interests of the public and of the sick poor, should be in the hands of those best fitted to guide them; and that, in their executive direction, the professional element should be predominant and absolute, subject only to certain specific restrictions. Likewise, that all rules and regulations of hospitals should be subject to the sanction of a competent public authority.

Secondly. That all hospitals, of every kind and class, should be subject to Goveramental inspection; and that the authorities of all such institutions should be required to

submit to a properly constituted central authority, annual returns of their financial and professional operations in such manner and in such forms, as may be directed by the Legislature. That these should be printed, presented to both Houses of Parliament, and published for general information.

Thirdly. That in the building of new, and alterations of old, hospitals the principles which are in themselves best fitted to secure the greatest attainable purity of all the agencies to which the sick are of necessity exposed should be observed as far as practicable. The pavilion plan is at present believed to fulfil those conditions most completely.

Fourthly. That all general hospitals should admit every class of disease, accident, and injury, and should be freely open to all poor persons unable to pay for, or procure treatment at home, no distinction of pauperism being retained in relation to sickness and accident. But that persons actually destitute, who labour under incurable diseases, or old age and infirmity, such as require medical care and nursing, be provided for, as at present, by the Poor-law authorities.

Fifthly. That all existing and all future special hospitals should be required to be licensed or authorised to receive persons for treatment on producing proof, to a competent public authority, that in their sources of support, appliances, establishments, and arrangements, they are fitted for the purposes they are intended to fulfil.

Sixthly. That a Royal Commission be appointed to examine carefully into the whole question of hospitals, and to devise a scheme, should it appear to be desirable or necessary after inquiry, to such Commission, so to regulate the medical relief of the poor as to preserve all reasonable rights, privileges, and freedom of action to any public hospitals which at present possess them, and at the same time secure to the sick poor the provision of medical aid on the first invasion of serious illness, and in as close proximity as possible to their own homes.

Seventhly. That this inquiry should include an examination of the charters of all endowed hospitals, the relations of hospitals to medical schools, and the better provision of the means of clinical instruction in general hospitals to students of medicine, without annoyance or detriment to the sick; the proper regulation of all out-patient departments; the relations of all dispensaries, free and provident, to the hospitals; and, in fact, all matters which bear directly or indirectly upon hospitals in relation to the successful treatment of disease.

Lastly. That, with special reference to the metropolis, a central authority be created, to regulate admissions to all hospitals where there are vacant beds for such sick persons as are unable to find accommodation in the hospitals nearest to their abodes; to arrange for the daily examination of all such cases by a competent professional staff; to have charge of all ambulances, and have power to deal compulsorily with all outbreaks of epidemic and contagious disease, in such manner as the public safety may require, in strict accordance with the laws on the subject.

There are many other matters which might have been considered in an exhaustive review of the hospital system of this country, could the requisite space have been spared for it. Enough has, I believe, been said to indicate the general principles which should, in my humble judgment, be observed to bring our hospitals to the highest attainable standard for the successful treatment of disease. It cannot be maintained that this is at present the case with regard to such structural and other arrangements as are necessary to secure to the poor as fair a chance of restoration to health as the rich enjoy in their own homes; for this is the standard which should be arrived at, and is attainable. That this can be done without pauperising the breadwinners, without depriving children of the care which mothers alone can give for a longer period than is absolutely needed for their restoration, and without prejudice to the healthy development of a sickly scrofulous child, by placing it in unhealthy hygienic conditions when sick, I am thoroughly satisfied. It can also, I hold, by proper organisation, be accomplished without drying up any of the existing sources of private charity and benevolence, and without diminishing the manly feeling of self-reliance and the wholesome cultivation of thrift among the industrial classes.

It is to the lasting honour of our profession that our hospitals afford to all who enter them the best medical and surgical skill in its ranks without burdening the resources of the charities themselves.

That the commercial aspect of the question has been entirely disregarded in the remuneration of our leading hospital physicians and surgeons, without chilling their zeal, damping their devotion, or staying their hand in any way, raises them above the reach of reproach, even from those foolish fanatics of the hour who have the doctrine of humanity on their lips, and yet would, were it in their power, arrest the progress of science in seeking to discover the means of diminishing human suffering.

There are some rewards high above the temporal honours grudgingly bestowed on the saving of human life, and lavishly expended on its destruction. These rewards the hospital surgeons and physicians receive in full measure from the unbounded gratitude of the sick poor and suffering, who have nothing else to bestow.

It was no exaggeration of the ancient poet to proclaim that,

> "A wise physician skilled our wounds to heal,
> Is more than armies to the public weal;"

or of the great orator whose immortal saying should be placed over the door of every hospital—"Homines ad deos nulla re propius accedunt, quam salutem hominibus dando."

INTRA-CRANIAL LESIONS,

ILLUSTRATING SOME POINTS IN CONNEXION WITH THE LOCALISATION OF CEREBRAL AFFECTIONS AND THE ADVANTAGES OF ANTISEPTIC TREPHINING.

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(Concluded from p. 543.)

III. Tumour of Dura Mater. Epileptic convulsions; trephining; removal of tumour from dura mater and orbital cavity; recovery.—IV. Abscess of Brain. Head injury; symptoms of cerebral affection; rigor; convulsions; indications of probable localisation of lesion; proposed opening of cerebral abscess prevented; death; post-mortem trephining and opening of cerebral abscess, confirming diagnosis; post-mortem examination. — Concluding observations.

III. TUMOUR OF DURA MATER.

Epileptiform convulsions; trephining; removal of tumour from dura mater and orbital cavity; recovery. — This patient was a girl about fourteen years of age, who was admitted into Ward 22, Glasgow Royal Infirmary, on July 22nd, 1879, suffering from a swelling at the upper and inner portion of the left orbital cavity. Her object in seeking hospital treatment was the removal of this small tumour. It was about the size and shape of a kidney-bean, its flat surface lying against the roof of the orbit, and extending inwards under the orbital plate of the frontal. It seemed firmly fixed to the periosteum, and it had a fibrous feeling. The pupil of this eye was contracted, and exhibited little response to light. When the finger ran over the surface of the brow, a prominence about the size of a large barley-grain was felt about two inches and a half above the supra-orbital ridge. This little body was firmly fixed to the periosteum. She complained of a dull fixed pain confined to the left side of the brow. Her history showed that she had been treated for months previously by large doses of iodide of potassium; but, notwithstanding, the pain in the left side of the forehead became worse, and the tumour in the orbital cavity increased. The contracted state of the left pupil and the pains which she experienced over the front of the left side of the brow presented a probability of the presence of intra-cranial pressure, as the small tumour in the front of the orbital cavity could scarcely produce these. She was therefore advised to remain in the ward for observation. A few days after, while sitting at the bedside, she uttered a cry, and immediately the muscles of the right side of the face began to twitch, the right arm was firmly flexed, and violently twitched. The twitchings lasted for two or three minutes, and were entirely confined to the right side. An interval of ten minutes elapsed, when the spasms reappeared in the right side of the face and on the right arm, lasting for about fifteen minutes. Two minutes after a third attack ensued, this time involving the whole of the right side of the body. These attacks began to be more prolonged, and the interval between each shorter, until they became continuous, the whole body becoming implicated in

a general convulsion. Simultaneously with the commencement of the convulsions she lost consciousness, which continued throughout the attack. Towards the end of the third hour from the commencement of the attack the face became livid; the respiration extremely slow; the pulse slow, irregular, and feeble. These symptoms were evidently increasing, and a fatal issue seemed imminent. Her temperature during the last two hours increased at the rate of a degree each hour. At 8.30 it was 103·4°.

Under these circumstances trephining was determined on. The barley-sized node over the left side of the frontal was selected as the seat of operation. In cutting through this node it was found to be gummatous in appearance, and to extend over the frontal in a flattened form continuous with the pericranium. The bone underneath this little tumour was found to be rough and imparted a softer feeling to the finger than usual. A trephine having a disc an inch in diameter was chosen and a portion of bone was elevated. The skull was thicker than normal, and attached to the under surface of the disc was a tumour of a gummatous aspect. A portion of the tumour adhered to the disc which was removed. The remainder was attached to the dura mater and spread over that membrane in a downward direction towards the base of the frontal lobes. At the trephine opening the tumour was fully a quarter of an inch in thickness and three-quarters of an inch in breadth. From this point it tapered down to about one-sixteenth of an inch in thickness, while its breadth increased, so that it appeared like a leaf spread over the surface of the dura mater. The tumour was removed from the dura mater as far down as the orbital portion of the frontal, the dura mater being gently pressed aside to permit of this. The supraorbital tumour was then removed. In doing so it was found to have a firm attachment to the orbital plate of the frontal, and it was seen to be continuous with the barley grain-sized nodule on the left side of the brow, the connexion between these two points being about a millimetre in thickness, but having a superficial square area of about two inches. It was difficult to separate this without removing the pericranium, which consequently was removed in several places. The skull was roughened and softer than usual over this portion. After the whole of the tumour was removed, drains were introduced and the paris were brought together by sutures.

After recovering from the influence of the anæsthetic the convulsions did not return. Next morning, twelve hours after the operation, the patient's temperature was 99·6°. She was perfectly conscious, answered several questions intelligently, lifted her head to get dressed, and stated that she felt well. Her right side, however, remained completely paralysed.

On the fifth day after the operation her temperature began to increase shortly after she had been dressed. In an hour after she became aphasic, and the convulsions returned. When this condition was made known to me I visited the hospital and removed the dressings, which had been applied with a little pressure over the wound, in order to reduce a slight bulging which appeared at the trephine aperture. An hour afterwards her condition was greatly improved, the convulsions had ceased, and consciousness was restored. From this time she gradually improved, the paralysis of the right arm and leg passed slowly away, and her intelligence became perfect. The wounds were firmly healed in a month from the date of the operation; but she was kept "assisting" in the ward for another month, after which she was dismissed. From that time till now she has visited the ward to report her condition at least once monthly, and she has continued in good health down to the present. She is engaged in regular employment.

The indications which led here to a probable locus of brain pressure were: (1) The contraction and fixity of the left pupil. (2) The presence of a supraorbital tumour of a gummatous character and of a small nodule of probably similar consistence on the left side of the frontal. (3) A fixed dull pain on the left side of the brow, between these two tumours. (4) Convulsions commencing on the right side of the face, and afterwards involving the right side of the body (though ultimately becoming general).

IV. ABSCESS OF BRAIN.

Head injury; symptoms of cerebral affection; rigor, convulsions; probable localisation of cerebral abscess; proposed opening of cerebral abscess prevented; death. Post-mortem trephining and opening of cerebral abscess confirmatory of diagnosis.—On July 21st, 1876, J. McK——, aged eleven years, was admitted into Ward 21, Royal Infirmary, Glasgow, having met with an accident two weeks previously whereby his head was injured. He had fallen from a height on his head; the particulars relating to the accident could not be more definitely ascertained.

On admission he had a partially cicatrised wound, about an inch and a half long, situated over the left eyebrow, which was suppurating slightly. The skull under this, for about the size of a shilling, was found denuded of periosteum. His rectal temperature was 100°. He complained of pain, on pressure, over the left side of the frontal. He slept day and night, except when roused and his attention sustained. He was quite intelligent when awake, but as soon as he was left alone he dropped asleep. His wound was attended to, he was restricted to milk diet, his bowels were acted on, and he was very carefully watched.

Seven days after admission he had a rigor, lasting five minutes, after which he vomited, the ejected matter containing orange seeds, an orange having been given to him surreptitiously by a friend. Taken in conjunction with the high temperature which was maintained from his admission, this rigor was considered to indicate the probable formation of pus. Five days after this (twelfth day from admission, twenty-six days from date of injury) he had a convulsion, confined to the right side, and which lasted half an hour. When seen by me the convulsion had passed off, but he was distinctly aphasic, answering "No" to everything, and making efforts at communicating which ended in a series of "No, noes."

As it then stood, the case was clearly one of cerebral abscess, the probable locus being the third frontal convolution. Trephining and evacuating the abscess was the clear surgery. It was proposed to lay the skull bare, and to remove a disc of bone as near to the third frontal convolution as practicable. If an accumulation of pus sufficient to account for the symptoms were found between the skull and the dura mater no further steps would be taken; but if not, the dura mater would be opened, and a bistoury would be inserted into the third frontal convolution.

Unfortunately the result of a consultation was decidedly to negative "in the meantime" the proposed operation, and advised to await the further development of the case. The friends who had been willing to have the operation performed while the patient was unconscious began, now that he had regained consciousness, to defer the operation. They were clearly told that the recovery of consciousness was in all probability a mere lull which would soon pass, and that delay would probably be fatal. They persisted in deferring the operation, promising however, that should the symptoms become more aggravated they would consent to it. The condition of the patient remained much the same for thirty hours. At the end of this time the temperature began to rise from 101·6° to 104·8° within two hours. Slight twitchings set in in the right side, followed by convulsions confined to the same side. The friends then consented to the operation. I was again sent for, but only arrived in time to see him expire.

After death it was deemed advisable to perform the operation previously proposed, in order to see what would have happened had the operation been permitted, liberty to this effect being granted by the friends. A disc of bone was removed from the temporal fossa, at a part where the periosteum was congested and the skull surface roughened. Between the skull and the dura mater there was a deposit of flaky lymph. The dura mater seemed congested. These were much too slight to have given rise to the symptoms exhibited during life. A crucial incision was therefore made into the dura mater. The brain substance was congested. A narrow-bladed bistoury was inserted into the brain for an inch and a half in the direction of the third frontal convolution. Pus welled out by the side of the bistoury, which was left *in situ*. After the lapse of the recognised time for the performance of post-mortem examinations the calvaria was removed, the congested brain membranes reflected, and careful sections were made into the brain substance. An abscess the size of a pigeon's egg was found, involving the white matter of the second and third frontal convolutions; the blade of the bistoury, which had been inserted through the trephine opening, was found lying in the outer portion of the abscess cavity. The brain substance round this abscess was deeply congested, the congestion extending into the anterior part of the left lateral ventricle in one direction, and involving the cortical substance in the other. The pus in the abscess was of a greenish hue. There was congestion

of the entire left frontal lobe. There were no other diseased appearances. The body was otherwise healthy.

Remarks.—The post-mortem shows the accuracy of the diagnosis both of the cerebral abscess and its localisation. It demonstrates the fact that the evacuation of this abscess was the clear surgery. The unfortunate refusal to allow the operation to be performed while the lad was living put it beyond our power to prove the likelihood of recovery; but had the operation been performed at the time when it was first proposed by me, I believe that the boy would have had a fair chance of living and doing well.

CONCLUDING OBSERVATIONS.

In head cases, where convulsions are likely to occur, it is of importance, as Dr. Robertson (Glasgow) has pointed out, to have an intelligent observer in constant attendance, as the record of the first indications of the impending convulsion and the parts affected by them is of great use as a guide to localisation. At a variable time after the commencement of the attack the convulsions, in many instances, become general, and then the indications as to the special localisation are lost. Cases 2 and 3 illustrate this point. In both the seizure was at first limited, and pointed to the localisation, and in both the convulsions afterwards became general, losing all special significance. Again, a symptomatic appearance may occur during or after a convulsion, which, if noticed and recorded, may aid the surgeon in his diagnosis. This is exemplified by the aphasic condition which came on in Case 4 after the convulsions, and which lasted only a short time. Had it escaped notice the particular part of the frontal lobe which was the seat of the abscess could not have been made out. A careful record of the temperature is of great service in indicating the approach of convulsions. In each of the cases noted above the convulsions were preceded by a rapid rise of temperature. The rectal temperature was taken every three hours, until it began to rise, when it was noted every hour, until it again descended to normal. In this way the careful record of the temperature gave those in attendance a forewarning and prepared them for what was likely to ensue. The first case mentioned shows that a portion of bone destitute of pericranium may be shifted from one part of the skull to another and remain in that position, apparently alive and uniting with the skull, forming an osseous plate over the trephine aperture. The first three instances illustrate the perfect immunity from inflammatory products which attend aseptic trephining. When the skull can be opened, the cerebral coverings incised and the brain exposed without fear of inflammatory mischief, trephining ought to be employed, where the localisation of the brain pressure is established. Besides operating in traumatic cases, trephining is justifiable in idiopathic cases, such as, for instance, tumour of the dura mater.

THE PROSPECTS OF CASES OF VALVULAR DISEASE OF THE HEART.[1]

BY J. MILNER FOTHERGILL, M.D.,
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OUR views as to the prognosis or prospects of the future of cases of valvular disease of the heart are undergoing very considerable changes, and that, too, in a direction opposite to the hopelessness with which they have been so universally credited in the past. In the title of the present paper I deliberately prefer the word "prospects" to "prognosis." The prognosis is "the art of foretelling the course and event of a disease"; and as we all know the course of valvular diseases of the heart is downwards, and the event death, the word does not convey precisely the impression I desire to make upon your minds. The subject is not a new one to this Society. On Dec. 17th, 1877, Dr. Andrew Clark read before it a paper entitled "On the Prognosis of Mitral Insufficiency," marked by his peculiar power of acute observation and accurate reasoning thereupon. The tone of his paper was hopeful. The prognosis of forty years ago was most unfavourable; the prognosis of the present he thought "on the whole had become more favourable, and that the grounds for forming a favourable prognosis were being brought steadily to light." Such, then, is the deliberate utterance of a physician whose acumen is generally recognised; and it is well worth our most serious attention. It is quite right that we recognise clearly, and without disguise, the terrible seriousness of a leak or an obstruction in the valves of the heart. An eddy in the blood-current is a very grave matter, and has far-reaching consequences. Its influence reaches backwards to the furthest and remotest capillaries. In making this statement, of course, I do not forget that so long as the mitral valve does not leak this "Rückwirkung," or "back-working," is not found. But in the present paper I do not propose to cite a series of quotations from various authorities more or less generally known, nor to pursue the morbid consequences of a defect in the cardiac valves, as seen in the dead-house. We have had enough and to spare of this aspect of diseases of the heart. The Pathological Institute of Vienna will, in itself, be amply sufficient to tell us all how grave are the sequels of cardiac valvulitis. We at present labour under a depressing conviction of the myriad troubles which follow in the wake of a mitral lesion. There exists no necessity for us to pursue further the tremendous seriousness of extensive mitral mischief; there are plenty of young aspirants to fame who view and study disease in the dead-house, and who pursue its ravages with the microscope, to see that we make no mistake in estimating the grim import of these changes. We are in no danger in that direction; but what I venture to say, having thought it for some time, is that we apply this grim aspect too exclusively to all our cases—and of this, I think, there can be no doubt.

Early observers found in certain grave cases a murmur heard over a certain area of the heart, and when the post-mortem examination came, sure enough there was a lesion in the valve indicated thereby. Further, the sequelæ of that lesion undoubtedly brought the patient to the grave, having slowly wrought his ruin. The next step from this was to assume that when a murmur was heard in the heart, the person in whom it was heard was assumed to be tottering over his grave. "I have just heard your death-knell," one of these self-satisfied physicians would exclaim; and the misery such thoughtless speeches wrought has been pointed out by many reflecting writers. It was injudicious on their part; it is now more blameworthy, when we know that a murmur is not always—

> "The rift within the lute,
> Which soon shall make the music mute."

It was foolish in them, it is dishonest in us; for we know, or ought to know, better than found a gloomy prognosis merely on the presence of a murmur. Understand me fairly; I have no desire to tilt against the teachings of our handbooks in this article. It is very necessary, very desirable indeed, that the student be taught, and carefully taught, the seriousness of a valvular leak in the heart, and also the import of a murmur when heard. He must certainly start off from this; but what I wish to say is, that in practice he must not stay there. If he does he will drift into much trouble. Unquestionably by so doing he will never fall into error when a case draws to its final stages. He will never err by under-estimating the gravity of any case. He is safe on that side of the question. But he must remember Scylla and Charybdis. The too studious avoidance of the one entails the danger of running on to the other. While guarding against taking too light a view of the case, he runs the risk of looking at some cases far too gravely.

As my expressions may seem to some as heterodox, and too individual, I will quote from others some passages with which I thoroughly agree, and which express my meaning more clearly and eloquently than I can pretend to do. In 1854 Stokes of Dublin, whose every word will be listened to with the attention it merits, wrote: "So general is the belief that sudden death is the inevitable termination of disease of the heart that the very suspicion of the existence of such an affection leads to great and injurious mental depression on the part of the patient, and corresponding anxiety among his friends. It will therefore be right that the physician, by appealing to the real facts of the case, should do his best to diminish these apprehensions." But it is just the "real facts" that have to be ascertained now, as then, at which it is so desirable we should arrive. This great authority goes on to say: "It is generally believed that organic disease being once established, there is a progressive disorganising process set up, which must end in death, either by rupture of the valves, organic disease of the remaining portions of

[1] Read before the Medical Society of London, Feb. 14th, 1881.

the heart, or obstruction to the current of blood. And this is true in the great majority of cases. But, as we have already seen, there is reason to believe either that this disorganising process may be occasionally of singular slowness, so that the patient may live for many years in the enjoyment of good, or at least tolerable health, or that the diseased action is really arrested and the lesion becomes stationary. I have seen several cases which admit of no other explanation." This is no doubtful utterance, and Dr. Andrew Clark says our present prognosis has become "more favourable." But where certain views are antagonistic to what is generally taught in medical schools, their growth is slow and their progress is impeded at every turn. Students must be taught the gravity of valvular diseases of the heart; about that there can be no diversity of opinion. Whether, when they become practitioners, it does not behove them to instruct themselves as to the other, if rarer, aspect of valve lesions of the heart, or not, is their business, not mine. But I venture to think that patients with injured cardiac valves take such a natural interest in the matter that the members of the profession will have before long to rouse themselves on the subject. Diseases of the nervous system, and the various aspects of the germ theory, have largely absorbed the professional attention of recent years. But the public, who suffer from a variety of maladies, irrespective of whether they are the special subjects of medical study at the time or not, cannot be expected to be so completely carried away by the current of medical thought which happens to be prevalent or uppermost at the time. And this I say as one having some experience, at least in diseases of the heart. I have no wish to disparage the knowledge of the general practitioner, or in any way to undermine the confidence the public repose in him, nor do I forget for one moment the wide range over which his information must necessarily extend. I merely wish to take this opportunity in the well-known Medical Society of London to utter a word of warning as to the necessity for greater intimacy with the diseases of the heart than at present obtains. If I may be permitted to speak from my personal experience, I can say that in the serious, grave, well-marked cases of valvular disease corresponding to what they read as described in their text-books, and which they have seen in the cases shown to them in their student career in the hospital, and in their clinical lectures, they gauge the cases quite correctly and accurately. But when the features are not so well marked, then their want of thorough familiarity with the subject reveals itself, and they regard many cases as graver than they really are. This must be mainly attributed not to want of acumen in the medical men, but rather to the teaching adopted to fit them for their examinations. The detection of a murmur, and the correct appreciation of its precise locality and maximum intensity, of its time in the cardiac cycle, is what is impressed upon them so earnestly that the importance of regarding the heart as a muscle, governed by the laws which affect muscles generally is largely lost sight of.

Consequently the presence of an undoubted murmur at one of the orifices of the heart carries them away at once to the valvular defect of which the murmur is the indication; and not only that, but to the series of morbid sequences which follow that lesion when well established, and passing on to its later and final stages. Now, it is in this inference that their error in the main lies. Amidst the many demands of general practice they cannot read up treatises upon the diseases of the heart; they have not the time, to say the least of it; and therefore when cases not accurately corresponding to those they are really familiar with present themselves, they are apt to lend to them a gravity not quite justified by the facts, but borrowed from more serious cases. It is against this I wish to warn them.

(To be concluded.)

MR. E. LUND, surgeon to the Manchester Royal Infirmary, has signified his intention of contributing to the funds of the institution the sum of £50 per annum for the next five years.

MR. D. RICHARDS, medical officer to the workhouse and infirmary of the Brighton Union, has been voted the sum of £50 for recent extraordinary services rendered on behalf of the town.

ON MEDICAL EDUCATION.

By H. BRIDGES ADAMS, M.D.

IN the various contributions to this subject that have appeared during the last few months in THE LANCET, one of the principal and regularly recurring causes of complaint has been the inadequacy of the present system of clinical instruction in hospitals. The complaints that have been made public are a faithful but certainly not exaggerated exponent of the dissatisfaction that cannot fail to be felt by a large body of earnest students and teachers. While this subject is occupying so much attention in medical circles, and proposals of reform are being ventilated on all sides, surely one of the first ideas to suggest itself is, How has this question been attacked, perhaps, even to a certain extent, solved, elsewhere? Taking for granted, as one is certainly justified in doing, that the modes of instruction abroad are well-known to many English clinical teachers, and to a proportionately large number of medical men, who, without being teachers, take a keen interest in the subject, it is not without some surprise that I have observed the omission of any remark on the differences that exist, or of any comparison between the respective merits of English and foreign methods. Perhaps, under these circumstances, it would not be out of place if I were to give a short description of the way in which clinical teaching is given in the University of Leipzig. The system, which is more or less the same throughout Germany, Switzerland, and Austria, differs widely from that pursued in the English and French schools, and a comparison may possibly throw some light on difficult points.

It has already been often and justly remarked, that an hour or an hour and a half divided among thirty to forty patients, and as many students, is utterly inadequate for teaching purposes. However great the competence of the teacher and the application of the learner, it would be a physical impossibility to obtain anything like the desired results in the allotted time, even supposing that all students could see, hear, and examine, which, of course, is far from being the case. Mr. Orchard[1] suggests that the number of students be limited, and the number of physicians increased. A more systematic plan of instruction, such as that carried out in Leipzig, has, at any rate in that University, met the difficulty in what I venture to think a more satisfactory way. I proceed to describe the principal features of that plan.

I must preface my remarks by stating that the medical course in Germany is divided into two periods. The first, covering on an average two years, is devoted to the preparatory sciences—anatomy, histology, physiology, organic and inorganic and physiological chemistry, natural philosophy, botany, zoology, and comparative anatomy. As soon as the student feels himself sufficiently strong in these subjects, he goes up for his first, merely oral, examination, the so-called "physicum." Two students are examined together, by five professors in succession. They are at liberty to choose their own day any time during the academic year. The examination lasts one afternoon; failure in three out of the five subjects, or in physics and chemistry alone, necessitates re-examination in the others. After the physicum comes the time of medical study proper; the student begins to attend the clinics, and before long to take special courses. The second period covers two or three years, according to the choice, very often according to the purse, of the student. The two periods are bridged over by the last half year of the first, during which the student prepares himself for his clinical studies by a course of pathological anatomy and histology (microscopical), by preparatory courses in medicine and surgery, and by occasional visits to the surgical clinic. With the exception of this preparatory half year the two periods are kept strictly divided. No one knows better than the student that he cannot run before he can walk; in other words, that pathology must remain a closed book to him till he has acquired a certain amount of introductory knowledge, and this knowledge the German student finds corresponds pretty well to the course mapped out for him. Till physiology has taught him the functions of the heart and of the digestive juices he can understand no case of cardiac or intestinal disease; till he is well grounded in anatomy he can profit by no surgical operation, can understand no case of new growth; till he

[1] THE LANCET, July 9th, 1881.

has mastered at least the elements of botany and zoology the history of parasites will be unappreciated and antiseptics will be a meaningless word.

These preparatory sciences demand a great deal of hard study and undivided attention, and every hour the student spends in a hospital before he has mastered as much of their elements as he requires for his medical study is worse than wasted. Of course, the same reasoning applies to the proposal of apprenticing the student to a medical practitioner for a certain number of years before he begins "to walk the hospitals." Writers to THE LANCET have given expression to this conviction in forcible language, a conviction that many who have the interests of medical education at heart earnestly desire to see gaining ground and taking practical shape.

At the end of the second period comes the great final examination, written, oral and practical, lasting two or three months, with pauses between the various divisions. Here again the student can choose his own time. Four are examined together. The subjects are normal and pathological anatomy and physiology, surgery and ophthalmology, medicine, obstetrics, hygiene, forensic medicine, and materia medica. This reduction in the number of examinations has, in the opinion of many, a salutary effect on the way in which the student works, while it affords the examiner sufficient opportunity for judging of the quality of the work done. Often recurring examinations are a source of much hasty, slovenly work, and it is decidedly the best students from whom one hears the remark: "As soon as the examination is over I can begin to work again with thoroughness and profit." Hitherto England and France have given preference to the plan of more frequent examinations. It is worth consideration whether Germany obtains less or more satisfactory results from a different system.

After this introduction I turn to the special description of clinical teaching in Leipzig, and must observe in starting that the manner in which the Leipzig hospital is built facilitates a method which the form of most London hospitals would render more difficult, though by no means impossible. It is built on the one-storeyed pavilion system; almost all the wards and all acute cases are on the same floor as the clinical hall. Ten long pavilions, three of which are medical, each containing twenty to twenty-five beds, and separated by strips of garden, are connected on one (narrow) side by a corridor. In addition to these ten pavilions there are twelve others completely isolated, while the main building has wards on the first and second floors, which are used almost entirely for chronic patients, and those who are not confined to bed. Opposite to this uniting corridor, and opening on to it, is a large amphitheatrical hall capable of holding over two hundred students. The seats are so arranged that each one has a good view of what is going on in the arena below, or being drawn or written on the black board. The beds are all on castors, and the patients whom the professor wishes to demonstrate to the audience are rolled into the hall. The distance is so short that cases such as typhoid and pneumonia can be brought across without danger; the patients themselves do not object to it. The very ill are indifferent, the moderately ill like the change. Of course, there are cases which cannot be removed, and these are, very occasionally, visited in the wards, but even then the discussion is carried on in the hall. As a means of transport from the upper floors or from isolated pavilions a large covered basket is used, like that employed for fetching the wounded, but the number of acute cases in the three medical wards opposite the hall (more especially in the ward immediately facing it), generally suffices for all purposes of demonstration. The medical division of the hospital is under the direction of a professor, who unites the functions of chief physician and clinical teacher, and who has besides a large consulting practice. I mention this fact to show that the amount of time necessarily devoted to this twofold capacity does not interfere with private practice. Under him are four assistant doctors who live in the hospital. Each of them has two or more pavilions under his care, which he is bound to visit night and morning. In addition to this the professor makes the round of the entire medical division of the hospital daily (Sundays included), and thoroughly examines every new or altered case. This visit, on which he is accompanied only by the assistant, has nothing to do with his clinical instruction, but furnishes him with material for it. The clinic occupies an hour and a half daily, and consists in the detailed demonstration of a few cases in the clinical hall. The method of instruction pursued is as follows. All available cases are distributed among the students, so that each student gets on an average ten or more cases in the course of a semester. It is his duty to thoroughly examine those cases and to continue to do so daily, to read up the chapters bearing on them in the handbooks, to study them from every possible point of view. A room is provided in the hospital, with microscopes, for the use of the student, and in each pavilion he finds the apparatus and chemical reagents necessary for examining the urine, sputum, &c. Neglect to use these opportunities is rarely allowed to pass uncensured. When one of his cases is brought into the hall for demonstration (which is done without his receiving any notice) he has to go into the arena and give a clinical history of the case before professor and students. The professor first listens, then questions and explains, and goes into all the points connected with the disease, its relation to the case in question, cause, course, and treatment. Everybody hears and sees, and, if it is a case of special interest, is invited to examine, always, however, with due regard to the condition of the patient, a principle that is on all occasions strenuously adhered to. Microscopical preparations relating to the cases are prepared beforehand, explained and looked at by all in turn, during or after the clinic. Interesting laryngoscopical or gynæcological cases are demonstrated by the assistants after the clinic, and a limited number of students are allowed to examine, day by day, till all have had their turn. A laryngoscopical course, comprising twelve lessons, is attended by all, and enables the students to examine the larynx for themselves. Six are admitted to the course, which is given by a specialist, and several of which are held in the course of the semester and during the holidays. Acute cases which have been once demonstrated are shown again from time to time, and the changes that have taken place are noticed. The post-mortem examination of every interesting case is made in the presence of the students, the organs are demonstrated and elucidated by microscopical preparations from former cases.

The students are prepared to profit by this really admirable clinical instruction, which no private study of handbooks could replace, by special courses in auscultation and percussion, in the ordinary methods of examination, such as the different urine tests, &c., and the elements of clinical symptomatology. One small course, covering four hours weekly during the semester, gives the student a thorough basis of elementary facts, on which he can build up a very fair amount of knowledge in the two or three years during which he continues to visit the clinic. These courses are generally given by the first assistant, and their excellence depends on his capacity. In Leipzig they have long been regarded by the students as one of the most valuable parts of their clinical teaching, and having gone through one is made by the professor a condition of admittance to the more advanced work of the clinic. It would not be difficult to find able men for the same purpose elsewhere.

To the visit of the English physician to the wards corresponds the nightly visit of the assistants, to which the students have free access, so that opportunity is thereby given them of following the course of any case in which they are interested, of examining at leisure, and of asking questions on any doubtful points. The system is therefore practically a combination of the bedside instruction with the clinical lectures, and unites, it seems to me, the advantages of both. Diseases are discussed at length and in all their bearings, and the discussion is regularly accompanied by the demonstration of cases in point. I should like to draw particular attention to the fact of the bedside instructions being given in a properly arranged amphitheatre, where a large number can see and hear, instead of in a ward, where only a few can see and hear, as this is one of the chief points on which the whole system turns.

A description of the clinical teaching at Leipzig would be very incomplete if it did not include the policlinic, or outpatient department. By means of an adequate organisation a large and valuable material is turned to good account, and no Leipzig student can look back on this part of his studies without recognising how much he owes to it.

The medical policlinic is divided into the ambulatorium proper and into the so-called district-policlinic, or patients who are treated at their own houses, and each division is under the direction of a special policlinical professor with two assistants. It is open five days weekly, lasts about an hour and a half, and is visited by patients from far and near. Each student chooses any one or more patients out of those in the waiting-room, and examines them in one of a number of small compartments specially built for this purpose. This

ensures privacy and a fair amount of quiet. The patients are then in turn demonstrated to the professor and remaining students by the student who has examined. The professor re-examines before the others, cross-questions, explains, and discusses the treatment. The student then prescribes, and his prescription is checked and signed by an assistant before it is given to the patient. Owing to the help of the assistants, the professor is not bound to despatch a given number of patients himself, but can devote as much time as he thinks desirable to any specially instructive case. The plan also forces the students to put all the knowledge they posses into practice, as everyone is desirous of distinguishing himself by correct diagnosis, and anxious to avoid the trifling humiliation of the reverse.

The district-policlinic is attended by more advanced students, as it involves a certain amount of responsibility. Several districts of the town are placed at the disposal of the University, and the second policlinical professor is at the same time poor-law doctor (Armenarzt). He and his two assistants have daily a consulting hour for the patients of these districts, and visit all acute and bedridden cases in their own homes. A certain number of these patients are distributed among the students, whose duty it then is to visit them, watch their progress, take their temperature, and prescribe. Small operations, such as tapping for ascites, introducing the stomach sound, vaccinating, &c., are performed by the students under direction. The treatment is controlled by visits from the professor and his assistants, and twice weekly the students give a detailed report of the cases under their care. The professor takes advantage of the opportunity to criticise and teach, and to comment especially on the practical side of the cases in question. Those students who attend the district policliniic have opportunities of seeing and treating a large number of acute and chronic diseases of children and adults, especially epidemics of the former. The great value of these visits is that they bring the student in contact with patients in their own homes, that they give him an insight into the difficulties that beset private practice, and make him practically familiar with the ordinary everyday disease with which he will most frequently have to deal.

The surgical and obstetric clinics and policlinics are arranged on the same principles, subject to such modification in detail as the condition of the patients renders necessary. In both departments the students are allowed to operate on all available cases, under the direction of the professors or assistants.

In order to give some idea of the way in which time is economised in comparison to the French schools, where one "hospital-lounge" occupies a whole morning, I subjoin a table of one day's work in the summer.

A.M. 7 to 8: Obstetrical Clinic. 8 to 9.30: Surgical Clinic. 9.30 to 11: Medical Clinic. 11 to 12: Surgical Policlinic.

P.M. 12 to 1: Ophthalmological Clinic. 1.45 to 3: Medical Policlinic.

The rest of the day is filled up by theoretical lectures and practical courses in specialities, which the students attend or not at their own discretion and convenience.

If my description has succeeded in doing anything like justice to an admirable system of medical training, readers will not be disinclined to pardon the length at which I have accomplished this end.

Frankfort-on-the-Main.

ON THE MODERN THEORY OF THE ACTION OF DIGITALIS.[1]

BY EDWARD T. TIBBITS, M.D. LOND.,
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NEARLY half a century ago the action of digitalis was thus described by Dr. Sigmond:—"It is upon the heart and the arterial system that digitalis acts; it diminishes the irritability of the constitution, and the frequency of the heart's action, &c., and so produces diuresis." Much has been written about it since that time, but it is extremely doubtful whether at the present day anything more is known with certainty concerning its action than is there set forth. At the present time it is regarded as a cardiac tonic, and by some authorities it is even classed with ammonia, alcohol, &c., and designated a cardiac stimulant. Moreover, it is said to increase arterial tension, and thus by virtue of this indefinite and very variable vascular condition to favour the flow of urine. In spite of numerous modern authors, its action as a depressant, or sedative (if the latter term be preferred), antiquated though it is, appears to me to be the only one which can be decidedly sustained.

In the first place, it may be observed that the experiments made upon animals have been misleading and unsatisfactory. In many instances the dose mentioned is poisonous, large, moderate. Such ill-defined doses must of necessity produce confusion. Traube showed that in dogs moderate doses of digitalis increased arterial pressure and diminished the frequency of the pulse. This statement is said to be confirmed by Boehm, Brunton, and Gourvat. An enormous rise of pressure is spoken of by some authors after the use of digitalis. An enormous rise of pressure is also said to be produced by strychnine. Do both these drugs act in the same direction? Some say digitalis arrests the heart's action in systole, others in diastole. Ackermann says that large doses increase arterial tension, and that it always acts by prolonging the diastole. Dr. Michael Foster tells us that a large dose of digitalis at first rapidly increases the general blood pressure, and the flow of urine is primarily arrested or diminished. The same author informs us, in another place, that the flow of urine is favoured by increase in general blood pressure, when there is increased frequency of the heart's action or constriction of the small arteries supplying other areas than the renal ones. Moreover, he says distinctly that constriction of the renal artery diminishes the flow of urine. Hermann affirms that increased tension in the arterial system and in the renal artery itself produces a flow of urine or increased pressure in the glomeruli, owing to vaso-motor dilatation of the vasa efferentia.

But, again, notice the following remarks by Ackermann. The decrease of temperature after digitalin is caused by acceleration of the circulation in the peripheral portions of the body, and elsewhere he says it produces its effects by diminishing the size of the small arteries, and impeding the flow of blood through them. If the flow of blood be impeded through the small arteries, how is the peripheral circulation accelerated? Traube and Ackermann both say that digitalis in *large* doses *lessens* the tension of the aortic system in fevers to an important extent. Dr. M. Foster again says arterial tension is increased by digitalis when it produces diuresis. Dr. Lauder Brunton says exactly the reverse.

Granting, for the sake of argument, that arterial tension can be accurately estimated, but little reliance can be placed on it, since Müller finds that, in experiments on dogs, more than sixteen per cent. of the body weight of the animal can be injected into the jugular vein without any marked increase of blood pressure. Within certain limits he says diminution of blood does not alter the blood pressure. This is directly opposed to Michael Foster and Hermann.

But further, supposing all experiments on animals to have been satisfactory, it does not follow that the same effect will happen in the human species. For it is well known that rabbits may eat belladonna and digitalis with impunity, and that the former does not affect the eye of the pigeon.

But, in the second place, the clinical evidence is equally unsatisfactory. Dr. Foster of Birmingham writes, "Digitalis in aortic disease (although there is said to be low arterial tension in this complaint) does harm, except when there is *over-compensation*, and throbbing and bounding of arteries all over the body, when it does good." How, I would ask? Is it by increasing arterial tension? The same physician also says, what others, including Fothergill, have endorsed, that diminution in the frequency of the heart's action under digitalis always means prolongation of the diastole. It is well to bear in mind that if this drug increases arterial tension, it prolongs the systole; hence it prolongs both systole and diastole, and we arrive by a periphrastic mode of expression at what no one can doubt—viz., that it diminishes the frequency of the heart's action. Fothergill further says that in aortic regurgitation, when there is intermission of the heart's action in the later stages, and a long diastole (notwithstanding the former statement that digitalis always means increase of diastole) it does away with the long diastolic halt, and excites more powerful ventricular contraction. Might I be permitted to ask whether these are demonstrations or simply hypotheses?

[1] Read before the Leeds and West Riding Medico-Chirurgical Society, also before the Yorkshire Branch of the British Medical Association.

Again, observe the remarks of Dr. Mahomed on the treatment of aortic aneurism. "Reduce arterial tension as much as possible," and then he goes on to say, "the use of certain drugs, such as digitalis, &c., is fraught with extreme danger from the great increase of arterial tension produced by them, so that an aneurism with thin coats might readily be ruptured." On the other hand, Dr. Allbutt tells us digitalis is *the* thing in this disease. Why? Is it because of the increased arterial tension it produces? Surely not. Dr. Brookhouse of Nottingham has recently given testimony of the same nature. But, says Dr. Mahomed, "when digitalis is pressed rapidly to produce its extreme effects the heart may be greatly slowed, and reduced pressure result;" but he thinks the experiment "too dangerous to be often justifiable." Why? Is it not an experiment which is not only carried out, but repeatedly carried out successfully in all parts of the country? Are not all medical men thoroughly well satisfied that the pulsations of the heart may be "greatly slowed"—i.e., reduced from 120 to 90, 80, or even less in the minute, after the administration, for a short period, of comparatively small doses of the infusion, say one or two drachms every six hours? Under these circumstances Dr. Mahomed grants that "reduced pressure" is the result, although he states just before that the use of digitalis is extremely dangerous, from the great increase of arterial tension produced by it. On this subject Ackermann says, as long as the arteries retain their normal tension (what is it, and how is it to be gauged?) digitalis should not be used. If it is, arterial pressure may reach a dangerous height, and serious hæmorrhage result. Might I venture to ask whether that height has ever been attained, and whether with the result of serious hæmorrhage? The same author recommends it in fatty degeneration of the heart, and in another place cautions his readers against the danger there is in using it when there is any cardiac debility (more especially, I believe, he says in fevers). When is a heart weak if not when undergoing fatty metamorphosis? Dr. Ringer believes it is imprudent to use this drug in aortic regurgitation when the walls of the heart are degenerating, just at the time, be it noted, when Dr. Fothergill thinks it is most beneficial. Another modern author says that "simple hypertrophy of the left ventricle only requires digitalis when it is excessive, and when acting tumultuously, or when the hypertrophy is insufficiently compensatory." This is rather an obscure account of its action, especially if the anxious inquirer happens to know that Dr. Fothergill suggests the possibility of the production of cardiac hypertrophy by the excessive use of digitalis.

As I ventured to state at the outset, digitalis has been described for many years as a cardiac sedative and a depressant generally, and I believe for all practical purposes this is precisely the correct description of its action at the present time. My reasons for such a belief are as follows:—

Firstly. Experiments prove as much its sedative action as any other, and as far as I can make out it is most probably accidental whether after poisonous doses the heart is arrested in systole or diastole. Even supposing the stoppage took place in systole, that is only the condition said to be present in any form of fatal syncope.

Secondly. In small doses—i.e., one or two drachms of the infusion—it certainly produces a feeling of depression and discomfort about the heart, nausea or even vomiting, if taken three or four times daily for a short time. In large doses, although said to increase arterial tension primarily, it quickly gives place to lowered vascular tension.

Thirdly. Like many other narcotico-acrid poisons, it produces dilatation of the pupil. I have seen it produced by dropping $\frac{1}{10}$ gr. digitaline into the eye.

Fourthly. Its action is in many ways identical with such powerful depressants as tobacco, aconite, lobelia, &c. The symptoms of poisoning by this drug are all indicative of its sedative action—e.g., two very interesting cases reported by Dr. Köhnhorn in THE LANCET three or four years ago. In these cases there was no enormous rise of arterial pressure, although the dose was large, and, indeed, Dr. Köhnhorn from these cases concludes that digitalis prolongs the heart-stroke and lessens the force of its contraction.

Fifthly. That no example is recorded, as far as I know, of its having produced a hard, powerful pulse, and vascular excitement generally. Indeed, clinical evidence is, for the most part, in precisely the opposite direction. Moreover, Dr. Allbutt and others declare it is the drug for internal aneurism, which it could hardly be if it increased arterial tension.

Sixthly. That many medical men, some of them eminent in the profession—e.g., Dr. Peacock—do not believe in the modern theory of its action.

Seventhly. That it is of great value in cardiac hypertrophy—second only to aconite in this respect. Does it act by increasing arterial tension, and increasing the force of the heart's action?

Eighthly. That its diuretic action, as a result of increased arterial tension, is not yet proved; indeed, this action is probably dependent upon dilatation, and not contraction, of the small bloodvessels. It has been stated that the same mechanism which produces diuresis also acts as a hæmostatic in hæmoptysis, epistaxis, &c. How is it, if there be contraction of the arteries, it causes diminished flow of blood through some vessels, and increased flow through others, granting the explanation to be correct?

Ninthly. The sedative and depressant action corresponds with almost everything that is known of digitalis from a physiological or clinical point of view.

What, then, is its real action? Being fully aware of the difficulty of the subject, and anxious to avoid anything like dogmatic assertion, I venture to suggest the following explanation. Modern physiologists insist upon an intrinsic nervous mechanism of the heart, connected with the cerebro-spinal axis by means of afferent and efferent fibres, which begin or end in a vaso-motor or vaso-dilator centre situated in the medulla. The latter is supposed to act by inhibition of the former. Might not digitalis act by producing a sensible effect upon the excito-cardio-inhibitory fibres, and simultaneously upon the vaso-dilator centres? When the heart is beating irregularly and inefficiently it is reasonable to suppose that increased inhibitory action coming from the medulla, in conjunction with vaso-dilator action on the small vessels, is a combination most likely to produce more regular and efficient action without of necessity increasing the heart's power. In cardiac dropsy there is, of course, venous obstruction. By dilatation of the small arteries a certain amount of peripheral resistance is removed. At the same time there is increased action of the cardio-inhibitory apparatus, and the result is what would be expected—a more deliberate and better defined arterial pulsation. The supposed increase in the power of the pulse is more apparent than real. Is it certain there is more actual force expended in the diminished number of strokes under the influence of digitalis than in the previous numerous irregular and inefficient ones? The heart's irritability is allayed, its sensibility diminished, the small vessels are probably somewhat dilated, there is less obstruction, and the improvement in the definition of the pulse is the natural consequence. This subject I have presumed to introduce for two reasons.

Firstly. Because I feel convinced that the present theory is a highly dangerous one, and calculated rather to destroy life than save it. I cannot help thinking that much of the change in ideas about the action of digitalis and increased arterial tension is due in some measure to the use and abuse of the sphygmograph. Some well-known authors write in a dogmatic style—simply, I believe, from sphygmographic tracings, which Mr. T. Wilmot (our house-physician at the time) and I have distinctly proved to be open to many fallacies. "An enormous rise of pressure" is spoken of by one author, while another says, "It may be considered as definitely proven that in mammals digitalis in therapeutic doses is a powerful stimulant to the circulatory system." A third declares it excessively dangerous to employ digitalis on account of the great tension it produces, and so on. But I cannot discover that these authors bring forward any clinical facts to support their statements. Can they relate cases where evil consequences have ensued or been likely to ensue from this increased vascular tension? Theoretically they seriously recommend this drug in fatty degeneration of the heart and as a cardiac stimulant in syncope. One gentleman actually argues for its efficacy in this condition because he gave it in a case of aconite poisoning, but—mark the combination—in conjunction with ammonia and brandy. Surely no one could accept such evidence as conclusive. For myself I should as soon think of administering opium to arouse a patient out of uræmic coma as digitalis with the idea of increasing the power of the heart's action in syncope.

Secondly. Because whatever *bonâ fide* arguments exist in favour of the tonic and stimulant action on the one hand, or of the sedative and depressant action on the other, could not fail to be forthcoming at a meeting which must represent all possible shades of opinion in the department of therapeutics.

REMARKABLE CASE OF RECTO-VESICAL FISTULA AND FÆCAL CALCULUS IN THE MALE.

BY W. ROGER WILLIAMS, F.R.C.S. ENG.,
LATE SENIOR HOUSE-SURGEON TO THE ROYAL ALBERT EDWARD INFIRMARY, WIGAN.

CHARLES P——, a painter, aged seventy-nine, was admitted into St. Peter's Hospital on June 21st, 1881, complaining of frequent and painful micturition. His illness commenced about a year and a half ago with great difficulty in making water, which only came in dribblets. The symptoms of stone soon supervened. During the last twelve months frequent micturition by night and day has been the most prominent symptom. He has been temperate, and has usually enjoyed good health. Has a large family of healthy children. No history of cancer, tumour, gout, stone, or gravel in the family. No indications of syphilis. Has had several attacks of piles.

The patient is a thin, anæmic, but otherwise healthy-looking man. Around the anus are the remains of external piles, and within the bowel others may be felt. The prostate is enlarged and tender, but not unduly hard; otherwise the gut seems healthy. He complains now of frequent and painful micturition. The calls to urinate are irresistible. At night he has to get up nearly every hour, but he never wets the bed. The pain, which is worse during and after micturition, is of a scalding and burning kind. There is no hypogastric dulness. A full-sized elastic catheter passed easily, and a little bloody urine was withdrawn.

Urine alkaline, and of a yellowish-red colour, depositing a large amount of flocculent sediment, consisting mainly of leucocytes and altered blood-corpuscles, with a few crystals of triple phosphates; it contained albumen to the extent of one-eighth solid after boiling; no casts could be detected; repeated examinations failed to discover any cellular structures such as are commonly to be found in cases of growth in the bladder. The total amount passed in twenty-four hours was rather below the average.

Pulse, respiration, and temperature normal. Appetite fairly good; bowels regular. He was sounded, and something rough was felt; it was thought that a faint click was elicited, but further manipulation failed to reproduce the sound.

June 29th.—There is a marked increase in pain and frequency of micturition. In spite of morphia suppositories, his nights are much disturbed. Some cellular casts found in the urine to-day. He was sounded again this afternoon, but no stone could be detected. It was concluded that he was the subject of malignant disease; his worn and cachectic appearance tended to support this view. Bowels loose and appetite failing. Tenesmus accompanies each act of micturition.

July 5th.—He has continued in great pain in spite of narcotics. This morning he vomited several times. Tongue dry and brown; seems much exhausted, and for several days has taken no solid food; bowels loose. It was noticed that the motions had a urinous odour, but he admitted having passed some urine per urethram into the bed-pan; however, it was considered probable that a communication between the bladder and rectum had been established. Examination of the rectum failed to afford any information on this point.

July 9th.—He died very quietly this evening, worn out by long-continued suffering. During the last few days he was unable to take anything without vomiting, except a little iced milk and lime-water.

Autopsy, fifteen hours after death.—Weather hot. Rigor mortis slight. Body emaciated. The peritoneum was normal. Viewed *in situ* the bladder appeared small and projecting, but otherwise healthy. It felt rather firm, as if containing some not very hard substance. The kidneys were small, their capsules separating without much difficulty. Each enclosed a few small cysts containing a clear urinous fluid. Both were congested, and had the cortex diminished. The ureters were healthy. The bladder was small, and its walls slightly thickened. The three lobes of the prostate were considerably and pretty equally enlarged; they were of normal consistence. There were no false passages. The urethra was healthy throughout. On cutting open the bladder its cavity was found full of a brownish-black material, of a doughy and in parts coriaceous consistence, made up of irregularly-shaped pellets about the size of large peas, more or less firmly adhering together, presenting an appearance not unlike the so-called "mincemeat." This substance formed a kind of cast of the interior of the bladder. It weighed one ounce and a quarter, and had a putrescent urino-fæcal odour. Microscopically it consisted chiefly of cellular and granular masses, with much molecular débris. Besides this substance the bladder contained only a small quantity of turbid urine. There were no phosphatic or other incrustations. The trigone vesicæ was superficially ulcerated, especially the cul-de-sac behind the enlarged prostate; otherwise the mucous membrane was healthy, with the exception of a few patches of injected vessels here and there. On each side of the base of the bladder were several small herniary protrusions of the mucous membrane between the muscular fibres. At a point one inch and a half above the orifice of the left ureter, on the left side of the bladder, there was an adhesion between this viscus and the middle portion of the rectum. Here a small opening, admitting a crowquill, at the bottom of a pit in the vesical mucous membrane, led directly into the rectum. There was no sign of recent disease. No enlarged glands could be detected. The rectum was dilated, but otherwise healthy. This condition was probably due to an abscess starting in one of the vesical sacculations—the result of enlarged prostate—and bursting into the rectum. The contents of the bladder were evidently altered fæcal matters from the lower part of the bowel, which had entered in small quantities at a time, and had been prevented from escaping owing to the hypertrophied prostate, thus cohering together and forming what I have called a fæcal calculus. In this respect, as far as I can ascertain, the case is unique. The condition of the urinary organs is a sufficient proof that there had been no great obstruction to the outflow of urine, as certainly would have been the case had the contents of the bladder been expelled solely by the urethra. This fact, together with the symptoms of diarrhœa and tenesmus observed during life, indicates that a considerable proportion of the urine had been habitually voided by the rectum. The other organs presented no important pathological changes.

Remarks.—Many authors have commented on the astonishing discrepancies occasionally revealed between the symptoms as observed during life and the lesions actually exposed at the post-mortem examination. Among others, Civiale[1] records the case of a man, aged fifty-eight, admitted into the Hôpital Necker with the following grave lesions, of which during life there were no characteristic symptoms—viz., tubercular disease of the lungs, cancer of the stomach, abscess under the pubic arch, extravasation of urine and pus into the peritoneal cavity, general peritonitis, and disorganisation of one kidney. In a minor degree the present case affords another example of the discrepancy. Indeed, the difficulty of diagnosing cases of recto-vesical fistula, in the absence of what may be called the pathognomonic signs, such as the passage of gas or feculent matter by the urethra, or of urine by the rectum, has been alluded to by most authors. It too often happens in these cases, as Civiale has remarked,[2] that we only discover the real nature of the disease at the post-mortem examination; for the signs by which it can be recognised are often wanting, or, if they exist, are so little pronounced as not to lead to any definite conclusion.

Recent authors write in the same strain. "Very often it is merely by chance that the diagnosis is made." Such is the opinion of Voillemier and Le Dentu.[3] But the diagnosis is often a matter of life or death. This case is a proof of it. Had the nature of the disease been discovered he would probably be alive now and enjoying good health. Though advanced in years he was young in the excellence of the tissues of his body. Thanks to Pennell, to Holmes, and to Bryant, we know that such cases may almost certainly be cured by a comparatively safe operation. Hence it is a matter of the greatest importance to ascertain the early symptoms; unfortunately, the few recorded cases give scarcely any information on this point.

In a case of Dr. Alexander Morison's,[4] the earliest sym-

[1] Traité Pratique sur les Maladies des Organes Génito-Urinaires. Tome troisième, p. 66. [2] Op. cit., p. 94.
[3] Traité des Maladies des Voies Urinaires. Paris, 1881. Tome deuxième, p. 343.
[4] Transactions of the Pathological Society, vol. xxx., p. 326.

ptom was rectal discomfort after urination. A little later there was pain over the pubes, and in the left hypogastric and iliac regions. Then came a muco-sanguineous stool, after which the symptoms subsided for several months.

In one of Mr. Bryant's cases[5] the symptoms began three months before the patient came under treatment, with diarrhœa, tenesmus, and muco-sanguineous stools. Then there was an interval of great improvement, after which unmistakable signs of the disease set in. In another of his cases the first symptom noticed was the passage of wind by the urethra, and for more than two years there was no other symptom.

In the case which I have recorded there was no history of these early symptoms. The only really valuable diagnostic sign was the mixture of urine with the fæces. The opening being tolerably high up, the urine was probably retained some time before its expulsion, when it was intimately mixed with the bowel contents. Thus the admixture attracted neither the attention of the patient nor of his attendants, though it had probably existed for a considerable period. In illustration of this point, Mr. Charles Hawkins's case[6] is highly interesting. In consequence of a communication between the bladder and sigmoid flexure, the rectum had undergone great dilatation, acting as a second bladder, the urine accumulating there, and being discharged in large quantities at a time per anum.

In conclusion, I wish to offer a remark on the dreadful burning and scalding pain which was for some time the most prominent symptom in this case. It will be remarked that a similar pain almost always occurs in the last stage of malignant disease of the bladder. In the earlier stages it is absent. In several cases, in which this pain has been very marked, I have found extensive ulceration of the vesical mucous membrane; and I am inclined to believe that it is to be attributed to this lesion.

Enfield, Middlesex.

A CASE OF POISONING WITH BELLADONNA.

BY PROTHEROE SMITH, M.D.

ON September 1st, 1881, Mrs. K——, a highly nervous patient, suffering from chronic metritis, inadvertently swallowed from half an ounce to an ounce of belladonna liniment, equivalent to about half an ounce of the root, about 5 or 6 A.M., just before which her bowels had acted copiously. She was seen by her attendant between 9 and 10 A.M., who administered a mustard emetic, which caused her to vomit freely. I first visited her at 2 P.M., when she was insensible, with wild, scared, and pinched features, anæmic, with lips blue and pale, the pupils being fully dilated, and not acting to the light; her tongue was rough and dry; the pulse was 130, thready and intermittent; the heart's action feeble, especially the first sound; respiration 30 in the minute; temperature normal. When roused she was quite incoherent: pain in the pit of the stomach, calling out when it was pressed; frequent retching; large quantities of light-coloured urine have been passed unconsciously. I prescribed one drachm of aromatic spirit of ammonia with four minims of sedative solution of opium (the only suitable remedies at hand), and arrowroot or beef-tea and brandy every ten or fifteen minutes. At 4.15 P.M. she looked better, more colour in her cheeks and lips, which continue pale, but pink. She has taken the food ordered every ten minutes; sickness less; pulse 112, fuller, without intermission; respiration 28; pupils remain dilated. She is still incoherent, but is able to retain her urine.

Sept. 2nd.—11 A.M.: Has passed a very restless night, and is still incoherent, imagining she has committed murder, &c. Pulse fuller, without intermission; heart's first sound louder, still rhythm imperfect; tongue somewhat moister; excessive itching of the nares. Cheeks flushed, lips red; the fingers and nails, which at first were blue, are more natural in colour. Abdominal pains mitigated; when roused says she hears everybody as though at a great distance, and sees them as greatly magnified; talks rapidly and incoherently. Catamenia appeared this morning before due. Ordered half a drachm of hydrate of chloral, with one ounce of water every four hours, with twenty minims of aromatic spirit of ammonia.—5.45 P.M.: Soon after taking the chloral she became rational. Pupils act better. Pulse 80, and full without irregularity; says she has not slept since she took the poison. To take forty minims of chloral, ten minims of nepenthe with water at bedtime, and, if necessary, repeat every six hours.

Sept. 3rd, 11 A.M.: Says the medicine (chloral) has acted like magic, the first dose restoring her senses in half an hour. She has slept all night, and is now restored to her usual bright and intelligent expression, and is quite herself again.

In the above instance it is worthy of remark that the domestic remedies generally at hand—viz., mustard emetic, sal volatile, brandy, and opium—so far modified the urgent symptoms as to render the case less dangerous to life, and gave time for procuring more efficient remedies; that the extreme feebleness and irregularity of pulse were at once relieved by small doses of liquid food, brandy, ammonia, and opium, but that for several hours it was found necessary to exhibit them at first every ten minutes, and afterwards every fifteen or twenty, in order to sustain the heart's action and prevent its intermitting. But the remedy which of all others produced the most happy result, restoring quickly the normal action of the heart and iris, and effecting a rapid cure, was the hydrate of chloral in half-drachm doses, with a small quantity of solution of opium, &c., every four to six hours, and a larger dose at night.

A case of poisoning by belladonna is reported in THE LANCET of January 8th, 1881, suggested by Dr. Trocquart of Bordeaux, in which chloral hydrate was successfully employed as an enema.

Another case is published by N. Grattan, L.R.C.P. Ed., in the *British Medical Journal* of April 16th, 1881, in which one-fifth of a grain of pilocarpin was hypodermically injected every fifteen minutes, with equally favourable results. As, however, the chloral is shown to be such an efficient antidote, I should be disposed in cases of poisoning with belladonna always to prefer it to the new and powerful remedy of pilocarpin, which in unskilled hands might not be altogether exempt from risk.

Park-street, Grosvenor-square.

[5] Transactions of the Clinical Society (1872), p. 127, et seq.
[6] Transactions of the Medical and Chirurgical Society, vol. xli., p. 441.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WEST LONDON HOSPITAL.

STONE IN THE BLADDER; BIGELOW'S OPERATION; CURE.

(Under the care of Mr. TEEVAN.)

SAMUEL A——, fifty-nine years old, watchmaker, was admitted on the 29th of August, having been referred to Mr. Teevan's care by Dr. Pearse. From notes taken by the house-surgeon, Mr. Lloyd, it appeared that one year before the patient began to be troubled with frequent and painful micturition. Some months later blood commenced to escape in drops at the close of the act of urination, and he was unable to ride in an omnibus on account of the pain he experienced. So long as he was quiet in bed he did not suffer much, but directly he walked about he had frequently to make water, attended by much pain. About two years before admission he had a long and severe attack of rheumatic fever, and after he recovered he noticed that if he walked quickly, or upstairs, his breathing became much embarrassed. The patient was a very stout man, measuring one yard and a half round the waist. He and his father were born in London, but his mother was a native of Kent. The urine was acid, its sp. gr. 1020, and there was a deposit which contained albumen.

On August 30th the man was put under the influence of ether by Mr. T. G. Alderton. Mr. Teevan introduced a medium-sized flat-bladed lithotrite, and seized a stone about one inch in diameter. Having broken it to pieces he evacuated the fragments with a No. 27 tube. The patient was

then put to bed with a hot fomentation on his abdomen, and a hot-water bottle to his feet. The calculus was composed of lithic acid, and weighed 220 grains. The operation occupied nearly half an hour. At 10 P.M. the temperature was 101·2°, pulse 87. Micturition was painful and bloody. Patient had a restless night.

Aug. 31st, 9 A.M.: Passed water tinged with blood every half hour, attended by smarting. 8.0 P.M.: Temperature 99·4°, pulse 88. 5.0 P.M.: Temperature 103·4°, pulse 120.

Sept. 1st.—8 A.M.: Temperature 101·3°; pulse 104. Had a bad night. Passed urine freely and without pain. 8 P.M.: Temperature 101·4°, pulse 104.

2nd.—10 A.M.: Temperature 99·2°, pulse 96. Had some sleep last night. Tongue covered with a moist white fur; bowels open frequently.

5th.—Temperature and pulse normal; patient quite comfortable. From this date the man rapidly improved, and left the hospital two days later, in all respects quite well.

21st.—Remains well; able to hold his water, which is quite clear, for about four hours.

STONE IN THE BLADDER OF A FEMALE CHILD; BIGELOW'S OPERATION; CURE.

(Under the care of Mr. F. SWINFORD EDWARDS.)

Anna C——, aged three years, was taken to the hospital by her mother, who stated that for the past nine months the child had been troubled to make water about every quarter of an hour, attended by much pain, so that it was necessary to hold her when she micturated. The urine deposited a copious thick sediment, but there was no blood in it. A sound was introduced, and two small calculi were detected, which could also be felt by the finger placed in the rectum.

On April 12th the patient was put under the influence of chloroform by Mr. T. G. Alderton. Mr. Edwards introduced a slender flat-bladed lithotrite, and having crushed the stones, evacuated the débris through a No. 20 tube.

In ten days the child left the hospital apparently well, and able to hold her urine, which she passed without pain. A fortnight later the child was again taken to the hospital, complaining of pain on micturition. She was readmitted, when a phosphatic concretion was found, which was removed in a similar manner as the former stones. There was no rise of temperature or untoward symptom after the operation.

On Sept. 8th, four months after the second operation, the child was seen at the hospital by Mr. Edwards. She was then quite well, and had perfect control over her bladder. The débris of the calculi, when dried, were found to weigh seventy-three grains, and to be chiefly composed of phosphates.

WOLVERHAMPTON AND SOUTH STAFFORDSHIRE HOSPITAL.

OBLIQUE FRACTURE OF THE TIBIA UPWARDS AND OUTWARDS INTO THE KNEE-JOINT, AND FRACTURE WITH DISPLACEMENT UPWARDS OF THE HEAD OF THE FIBULA.

(Under the care of Mr. VINCENT JACKSON.)

FOR the notes of the following interesting cases we are indebted to Mr. W. H. T. Winter, house-surgeon.

Colin B——, aged forty, was admitted on March 19th, 1881, with a broken leg. Pain was referred to the neighbourhood of the knee, but there was no deformity. On using passive motion there was excessive mobility at the knee. It was found that the inner condyle of the tibia retained its normal relations to the inner condyle of the femur, but the fibula and the rest of the tibia were freely and unnaturally movable. The head of the fibula was broken off and dragged upwards by the biceps to a point level with the middle of the patella. The accident was the result of the man slipping in the street.

A few hours after the injury the knee was found to be considerably swollen, but the swelling disappeared almost as rapidly as it had come. The diagnosis was: Fracture of the head of the tibia, passing obliquely upwards and outwards into the knee-joint, and fracture of head of fibula, with displacement upwards, most likely from muscular spasm. The limb was put up on a back splint, with two side splints and an ice-bag applied to the knee. In a fortnight's time the patient complained of pain along the outer side of the leg extending to the dorsum of the foot, but the cause of the pain was not diagnosed till afterwards.

On April 20th the splints were taken off; apparently no union had taken place. The limb was then put up in gum and chalk till May 10th, when the fixed apparatus was cut off and it was found that the fracture had firmly united. It was discovered, however, that the patient could not flex the ankle or evert the sole of the foot, and sensation was considerably diminished over the fibular region and over the outer part of the dorsum of the foot. The cold and warm douche and friction were used, but with no result. The patient was then daily galvanised along the course of the anterior tibial and musculo-cutaneous nerves, but it is not anticipated that he will be able to use the affected muscles till the provisional callus which presses upon the external popliteal or its divisions is absorbed.

COMPOUND SUBASTRAGALOID DISLOCATION OF THE FOOT.

(Under the care of Mr. VINCENT JACKSON.)

Joseph C——, aged fifty-six, had his right leg amputated some years ago for (?) epithelioma. He subsequently followed his occupation as a cabman. On Feb. 4th, 1881, he twisted his solitary foot when jumping off his cab, and was admitted with the following injuries: The foot was strongly inverted, and on its outer side was a wound, below and anterior to the outer malleolus, through which the head of the astragalus protruded. The astragalus was normally situated with regard to the tibia. Its relations with the os calcis were not made out, but the front of the tarsus was dislocated inwards. The displacement was reduced under chloroform, the wound dressed with carbolised oil, and the limb placed on a back splint. The joint was very rarely disturbed, the wound being dressed while the limb was on the splint. The temperature rose on the eleventh, twelfth, and thirteenth days, when it was found that there was a slough over the tendo Achillis, from the pressure of the heel pad, but with this exception the chart shows that the injury was attended by very little fever. The patient was allowed to get up fifty days after the injury, but with the splint on. Ten days after that the splint was discontinued. The patient made an excellent recovery.

PARTIAL RESECTION OF THE ELBOW-JOINT BY A CIRCULAR SAW.

(Under the care of Mr. MANBY.)

JAMES H——, aged sixteen, was admitted with an incised wound of the elbow-joint, caused by a circular saw. The saw had separated the olecranon from the coronoid process, and, entering the joint, had made a section of the lower articular end of the humerus, so that the greater portion of the trochlea, with the condyles and the olecranon depression, lay with the olecranon in the posterior flap. After the wound had been cleansed with carbolic lotion, the boy was put under the influence of ether, and the olecranon and separated part of the humerus were dissected out with all antiseptic precautions. The edges of the wound were brought together with gut sutures, and the wound surfaces coapted as accurately as possible with gauze pads. The limb was put up on an angular splint. Antiseptics were used for twenty days, and during that period the wound was dressed nine times. The wound into the joint was healed on the ninth day, and when the antiseptics were discontinued the wound was quite superficial, but the granulations were rather flabby. Thirty-six days after the accident the motions of the forearm on the arm were excellent, and the patient was gaining strength in the limb. Ten or eleven weeks after the injury the patient returned to his work.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES. By the will of the late Rev. R. Beridge, rector of Algarkirk-cum-Forsdyke, Lincolnshire, the Lincoln County Hospital, the Convalescent Home, Mablethorpe, and the Cottage Hospital, Boston, become entitled each to £10 per annum. Miss Martha Grant, late of Gloucester-place, bequeathed £1000 each to the British Home for Incurables and the Blackrock Convalescent Home.

AT a public meeting held at the Assembly Rooms, Aldershot, it was resolved to establish a cottage hospital for the town, the medical gentlemen offering their services gratuitously.

Reviews and Notices of Books.

Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques. Directeur de la Rédaction, le Dr. JACCOUD. Tome XXX. Ps—Rei. Paris: J. B. Baillière et Fils. London: Baillière, Tindall, and Cox. 1881.

THE principal articles in this volume are — Pseudarthrosis, by Denucé; Psoitis, by Heurtaux; Psoriasis, Purpura, Pustules, by Hardy; Pterygion, by Panas; Pubis, by Schwartz; Puerpéral (état) and Puerpérale (fièvre), by Stolz; Pulvérisation, by Beni Barde; Pupille, by Abadie and De Beurmann; Purgatifs and Régime, by Luton; Purulente Infection, by Alphonse Guérin; Quinquina, by Prunier and Guès; Rachis and Rachitisme, by Lannelongue; Rage, by Signol and Doléris; Rate, by Jeannel; Rectum, by Gosselin and Dubar; Rein, by Mardnel and Labadie-Lagrave.

The article on Purulent Infection by Guérin is long, carefully drawn up, and somewhat polemical. He gives as synonyms pyohæmia, purulent fever, and surgical typhus, and defines it as a poisoning of the blood, which terminates in the formation of multiple abscesses, that are improperly termed metastatic abscesses. A good account of the symptoms follows, evidently drawn from large personal experience. Indeed, M. Guérin remarks, it is right and proper that the description of this disease, destined soon to disappear and to be known to surgeons by name only, if they will follow the ideas first advanced by the author, should be made by one who has seen so many serious results; and he would not, he says, be surprised if before his death surgeons will have forgotten that the theory of phlebitis was once universally accepted to explain the phenomena of purulent infection. In regard to the etiology of the disease, he considers the most potent cause to be overcrowding of the wounded; but the presence of a wound is essential to its occurrence; exhaustion, insufficient food, loss of blood, and all depressing conditions favouring its onset. The theory of purulent absorption, he thinks, is not yet quite discarded; and he traces the successive statements that have been made on the subject in the works of Boerhaave, Van Swieten, and the older authors. The weak point of the theory, that the solid parts of the pus are absorbed, was pointed out by Maréchal, who observed that in that case every suppurating wound would be a source of danger; and as to the theory that the serous parts of the pus alone were absorbed, it may fairly be said that a liquid without pus-globules is not pus. The theory of Cohnheim, that globules of pus proceed from the escape of the leucocytes of the blood, he considers to have been refuted by Duval and Durante, and asks why, if they escape by diapedesis, they cannot re-enter the vessels by their amœboid movements. Hunter described phlebitis, and knew that it terminated in suppuration, but he did not associate it with purulent infection, with which he was unacquainted. The connexion was first pointed out by Dance; but the objection to the theory is that metastatic abscesses form without the slightest trace of phlebitis, recognisable either during life or after death, and without either clot or pus in the veins. He refers to Sédillot's valuable observations showing that a considerable quantity of healthy pus may be injected into the veins of a dog without fatal results, whilst putrid pus rapidly killed the animal, death resulting from obstruction to the pulmonary circulation. He notices the embolic theory of Virchow, in which it was supposed that, owing to the formation of emboli in some vessel, the pulmonary circulation was arrested at some part, and *necrobiosis* of the parts supplied by these vessels resulted — a theory to which many objections apply. M. Guérin points out the superiority of the doctrine of miasms and ferments, which he himself sustained in an inaugural thesis in 1847; and he even then suggested that the noxious particles might be caught and examined by making the air of the infected room pass through a plug of cotton-wool, and then placing the plug under the microscope. In 1868 M. Dibos, one of M. Guérin's pupils, wrote a thesis in which the same opinions were upheld, with the exception that the word "miasms" was dropped, as being too indefinite, the opinions of the writer being coloured by Pasteur's researches. Still more recently, the opinions of Bergmann, Schmiedeberg, Sonnenschein, and others, in regard to the existence of a poisonous alkaloid—sepsine,—have been advanced; but he thinks the general results of the treatment we in England term Listerism, together with the statement made by Pasteur in 1877 that a special figure-of-8-shaped microbion is to be found in the blood of those affected with pyohæmia, conclusively prove that this disease is due to a solid ferment. In regard to treatment M. Guérin has little to say, and only puts faith in good nourishment, wine, and quinine.

Accoucheurs will read with interest the article by Stolz on Puerperalité, which exhibits the state of mind that prevails in France, and probably in Germany, on this subject. He says: "The important question is to know if the disease can be transported by a healthy person coming from a contaminated house into the chamber of a healthy lying-in woman. English physicians, as Gooch, Gordon, King, Ramsbotham, Blundell, are generally convinced that puerperal fever can be communicated either by contact or indirectly. They therefore recommend that the hands should be kept scrupulously clean, and that the clothes should be changed when a healthy woman is visited after the physician has been with a patient suffering from puerperal fever. When these precautions are insufficient, they abstain for some time from attendance on confinements, and refer their patients to some more fortunate practitioner. As a rule we are less particular, and are yet unable to cite examples which may lead us to regret that we have not had the scruples of our English brethren. ..... In England they interdict a midwife who has attended a contaminated woman from practising for a certain period." Stolz then goes on to say that he is not a perfectly convinced contagionist, because he has never observed anything which clearly demonstrates the existence of contagion. During five-and-forty years of hospital and civil practice, in the course of which time he has had to face numerous epidemics, he has made upwards of a hundred autopsies of women who have died of puerperal diseases—autopsies made usually immediately after his morning round,—and he has then instantly gone to his private patients without change of clothes, and yet he has never seen any woman become affected in such a way as to suggest that he was the carrier of infection." We can only say that M. Stolz' patients have escaped by good luck rather than by prudent management. He acknowledges that the proximity of a surgical ward is dangerous. He considers that the conclusions which may be drawn from the study of the numerous accounts that have been published of epidemics of puerperal fever are: First, that they almost always occur during the cold and moist months of the year, and rarely during dry cold, and that they tend to disappear as soon as the air becomes warm and dry. It may hence be concluded that the state of the air has an influence on the production and duration of this disease. Secondly, that the disease attacks many lying-in women simultaneously, and that in each epidemic we may notice a period when its action is intense and violent, and a period when it is on the decline or suddenly ceases, without other apparent cause than a change in the state of the atmosphere. Thirdly, that the uterus and peritoneum are in all instances affected, that suppuration is nearly constant, and that the pus, more or less altered, is propagated from the uterus by

the absorbents—that is to say, by the veins and lymphatics—to the system generally, so that the primary accidents are almost always of an inflammatory nature, but subsequently become septic and infect the entire economy. Fourthly, that the general features presented by different epidemics are essentially similar, and the conditions observed in post-mortem examinations are the same, except only that some lesions are much more accentuated than others. Lastly, that all treatment fails in the fulminating form, whilst many different methods prove successful in the slighter form.

The article on the Kidney occupies more than two hundred pages, or a quarter of the whole volume. After giving a *résumé* of the general and microscopical anatomy of the organ, and the various views in regard to the mode in which secretion is effected by it, it is pointed out that physiologists generally are agreed that none of the constituents of the urine are formed in the kidney, but that they all pre-exist in the blood, from which they are separated by the cells of the glomeruli and tubules. The pathology of the organ is considered under the head of surgical and medical. Wounds of the kidney are rare, but Simon of Heidelberg has shown that gunshot wound of one kidney may be recovered from, for he records three cases of Germans thus injured in the Franco-German war, in which, after undoubted injury had occurred, the patients were restored to health. Contusions are more frequent, and are characterised by hæmaturia, retention of urine, and sometimes by tumefaction, together with nausea, vomiting, and even syncope. The results vary considerably, and are sometimes fatal. The subject of nephrectomy, or extirpation of the kidney, is considered at length; the opinions of Mr. Thomas Smith, Mr. Durham, and Mr. Bryant are recorded amongst English practitioners, and a table of fifty-three cases in which it was performed is given. Twenty-six died, and of the two modes of removal, by the abdomen and by the lumbar region, the latter is by far the more favourable. Bright's disease is, as may be supposed, discussed at length, and some interesting statistics are given from the General Hospital at Vienna, from which it appears that of 19,000 autopsies, 2430 were on patients who died from this disease, and of a certain number of them (those under Bamberger's care), 33 per cent. were primitive, and 67 per cent. consecutive to some grave disease which might be regarded as the cause of the nephritis. Amongst the more important causes mentioned are scarlet fever, small-pox, measles, typhoid and recurrent fevers, diphtheria, pyohæmia, puerperal states, acute rheumatism, pneumonia, syphilis, tuberculosis, scrofula and phthisis, carcinoma, jaundice, gout, diabetes, effects of cantharides, saturnine poisoning, and mercurial poisoning; a second group of causes includes cold, burns, and dermatosis; and a third group includes diseases of the urinary discharging apparatus. The pathology is very fully given. Both acute and chronic nephritis are shown to be of a parenchymatous nature, and thus the unity of Bright's disease is maintained.

Movable Atlases of Anatomy and Physiology. By Professor G. J. WITKOWSKI, M.D. The Text Translated. London: Baillière, Tindall, and Cox.

THESE atlases are ingenious attempts to present anatomical structure and arrangement by means of superposed coloured plates. Seven parts have been issued, illustrating the neck and trunk, the throat, the eye, the ear and teeth, the brain and nervous system, and the organs of generation. It is impossible to study these atlases without admitting that they are the result of considerable skill. But it is as impossible to accord them approval as educational works. If they should in any case stand in the place of careful personal dissection and study of the actual parts they will certainly give false conceptions of anatomical facts, while their entire inability to present the true relative size and proportion, accurate relations, or natural appearance of the parts renders them only misleading aids in recalling the forgotten knowledge of student days.

Annotazioni de Chirurgia Ortomorfica. Pei Dotteri G. ALBERTINI e P. PANZERI, dell' Ospedale Maggiore di Milano. 1881.

THIS *brochure* gives the results of the osteotomies performed in the Ospedale Maggiore of Milan on cases of deformities of the femur, rachitic disease of the diaphysis of the femur and tibia, and knock-knee, of which last sixty-five cases presented themselves. There is a short historical introduction recounting the history of the various operations, and details are given of each case, with drawings of a large number, which are exceedingly well executed. The results appear to have been very satisfactory.

STUDENTS' BOARDING-HOUSES.

To the Editor of THE LANCET.

SIR,—When a student, now a generation since, I went to the Scotch medical schools—an important consideration being economy in one's education and living. Your advertisements show the smaller amount payable in fees compared with many of the London schools, while, during my four years' studentship, my weekly bills, including my dining at my lodgings, and living comfortably too, averaged from 15*s.* to 16*s.* a week. The experience of other students, men now practising in London and the provinces, was similar. I found, then, that some students of my acquaintance living in London averaged 30*s.* in their weekly expenses, dining at an eating-house. To many of us English students economy was an important object, and I write what I know, that cheapness of fees, and cheapness of living, was a principal cause of many English students selecting Scotch schools in place of London schools. At one house in Edinburgh, where several friends lodged, there was a common dinner table, instead of separate dinners for each, thus affording a better dinner and greater variety with economy. Things may be somewhat altered now, as railways have tended to somewhat equalise prices all over the country.

Of course the excellence of the teaching was also a consideration, a reputation as a teacher being equally important to the lecturer as medical practice, while such was not the case in London, where many lecturers, when they make their mark in practice, are constrained by pressure of practice to give up lecturing. With the recent increase of fees at some of the London schools, and the extra cost of living in London, some plan for students' boarding-houses might very well be adopted, as the present scale of expenses is a great drain and a serious difficulty to many medical men who wish to bring their sons to the profession. Last year I learnt of a boarding-house near the Edgware-road station, used by pharmaceutical students, costing them a guinea a week, including their dinners, and comfortable dinners, with tart or pudding. Calling to see a student there, I saw the establishment was plainly furnished, but clean, neat, and comfortable. I am not advocating boarding-houses for all students; for many such houses would be unsuitable; the aggregation of some half-dozen or dozen young fellows in the same house might with some lead to more sportive play than work. Many can afford to live as they like, but for many students, to whom economy is an object, houses such as I have indicated, in some quiet street near the school, would be a great boon; and the dissecting rooms supplied cheaply and abundantly, as could be more easily done in London than in the provincial and Scottish schools, with economy of living, would soon increase the numbers of the London students, who would be glad to avail themselves of the many practical advantages of the London schools of medicine.

Yours, &c.,

September, 1881. DEVONIENSIS.

A NEW hospital for the treatment of diseases of the eye, ear, and throat has been opened at Shrewsbury. The sum of £8000 has been already subscribed towards the estimated cost—£10,000.

THE LANCET.

LONDON: SATURDAY, OCTOBER 1, 1881.

MR. BULL, F.R.C.S., of Newcross-gate, writes to a lay contemporary complaining that the jury who censured Dr. DONAHOO at the inquest held on the body of MARY ANN O'BRIEN "were not aware of the fact that a medical officer, acting under the Poor-law regulations, has no power to 'order' nourishment; he can only 'recommend' it to be supplied to what he considers a necessitous case." This fact has repeatedly been pointed out in our columns, and the reason for the regulation made clear. It is simply this: Medical officers are not relieving officers, and they cannot either legally or practically distribute relief. They know what a case requires, but it is wholly outside their province to determine whether the patient or the friends have the means to procure it. Unfortunately there is a great deal of systematic and cunning fraud practised by seemingly worthy persons in receipt of Poor-law relief. Instances have been brought to our knowledge in which the greatest and most urgent need has been protested in such a way as to impose on the medical man and to excite his warmest sympathies, while there have been ample resources at the command of the pauper. It is no part of the business of the professional attendant to search into the pecuniary affairs of any patient. For the medical man the patient is a "case," and he has no further concern than to see that its necessities are suitably supplied. The question whether what is needed can be procured by the sufferer or his family, or must be furnished by the local authorities out of the public rates, should be left to be determined by someone else—that is to say, the relieving officer.

The penultimate remark involves a concession to the sentiment of humanity. In strict law, it is no part of the duty of a medical officer to see whether his recommendations are adopted and carried out. When he has filled in the proper papers, he has done the utmost the Act of Parliament requires of him. If he goes again, and finds that the patient is still without the necessaries "recommended," he can only repeat his recommendation, and, if the patient dies for lack of food, he can refuse to give a certificate, thus bringing the responsible person—that is, the relieving officer—before a jury, who will deal with his neglect. Humanity, however, impels a medical man to do more than this, and he is not, as a rule, content to fill in the papers and let matters take their chance. We have repeatedly urged that it would be better in the long run if medical officers of Poor-law districts did their duty and nothing beyond it. The line of responsibility would then be sharply defined as the law draws it. As it is, because medical officers help the relieving officers, these men rely on their help; that is to say, they expect some pressure to be brought upon them by the medical officer in a particularly urgent case, and when this pressure is not felt they do not act promptly.

Let us look the facts in the face. Rightly or wrongly—but in any event *legally*—the guardians of the poor are also, and in a more practical sense, guardians of the rates. In their wisdom they generally prefer that sick persons who are in circumstances of extreme poverty should be removed to the workhouse. There is a strong feeling against this removal in the minds of the pauper class, and particularly of those recipients of relief who are so solely because they are incapacitated, from breadwinning, by sickness. We think the policy of forcing the sick poor into "the house" is cruel and short-sighted. It tends to break up homes which might be saved by a little timely assistance; and when once their homes are broken up because the Poor-law authorities will not save them, the families are demoralised and pauperised in feeling as well as in fact. It is a stupid and inhuman blunder to act thus by the poor. To stand by refusing relief while the household gods—the belongings which bind the house together and make it worth while to struggle and labour—are sold, or pawned without hope of redemption, is about as crass a piece of folly as sane men can commit. Nevertheless, this is the policy that finds favour with a majority of the boards of guardians, and it is approved at Whitehall. So long as it lasts medical officers have no right to fight against it. They may detest and denounce it as we do; but they must not endanger the lives of their patients by aiding them in the struggle against the strong arm of authority, which in the end must win. While the struggle lasts the sick poor suffer, because their need—perhaps pressing necessity—on the instant supply of which life may depend, is the bone of contention between a medical officer animated by humane, though unpractical, sympathy, and a relieving officer who is the agent and representative of a Poor-law policy which aims to starve the sick poor into the workhouse. Again there is, as we have said, always the possibility that the sick person or the friends are not really so poor as they pretend to be. So often does it happen that a relieving officer succeeds in discovering concealed resources that these officials, and the overseers under whose authority they act, are encouraged to deal harshly with applicants for relief. We cannot too strongly insist that no medical man should trust his own judgment, still less oppose it to that of the relieving officer, in the question of "poverty." It is enough that he points out the necessaries to be used in the case, and when asked gives an official "recommendation" on one of the forms supplied to him for the purpose. This done he has performed his duty. If humanity impels him to do more, it should be borne in mind that he is exceeding his duty; and, however benevolent this excess may be, it is not armed with any authority; and injudiciously exercised, his "influence"—such as it is or seems—may prove obstructive instead of helpful.

What, then, is the remedy for the existing state of matters? We venture to think it is obvious and very simple. Nothing more is required, and not less will suffice, than the issue of an "instruction" by the Local Government Board that relieving officers *shall* issue the necessaries "recommended" by medical officers until the next meeting of the board of guardians. At present too much discretion is left the relieving officers in dealing with the poor. It ought not to be permitted that they should play with the lives of the sick, even though the sport be legal. Let relieving officers be instructed to supply all the necessaries "recommended" by a medical officer until the next board day, and then let

the guardians determine whether the case shall remain under treatment by the district medical officer, or be removed to the workhouse. This is a reasonable and practical request, and we would press it on the consideration of Mr. DODSON as a ready way of putting an end to a grave scandal. At present medical officers are left to wrangle with relieving officers in the interests of the poor. We are prepared to admit that very often the medical officer may be wrong and misled by his humanity. Let the peremptory instruction we have suggested be issued, and there will be a final end of this unseemly and mischievous strife. If the guardians are, for any reason, unwilling to carry out the recommendations of their medical officer, the case should be removed from his treatment. If the necessaries supplied during the interval between two meetings of the board have been needlessly given—that is, if the sick person could have procured them,—it would be better to let the guardians exercise their power of recouping themselves from any concealed resources at the command of the pauper, than to run the risk of an error dangerous to life while they are fighting for the rights of public economy over the sick bed. We venture to hope our suggestion may be promptly adopted and carried out. To save time, let us anticipate the rejoinder that relieving officers do now give the necessaries "recommended" until the next board day. To this we reply that they do *not*. They exercise a discretion which ought to be taken from them. The "instruction" must be precise and compulsory instead of general and permissory. This is the reform needed, and it is this we seek.

FOR many weeks past the first thing sought for in the daily papers was the report of General GARFIELD'S health, and the bulletins were eagerly scanned by many thousands in all parts of the world. It has been announced that until almost the last these official notices were shown to the patient before being issued, and that they were purposely couched in the most hopeful language possible. This is so much at variance with the custom in this country, that it has given rise to no little comment, and as it may fall to the lot of any practitioner to have to share the responsibility of similar announcements, it is well to inquire as to their true purport and character. The first proposition we would submit is that bulletins are not written for the information of the patient, and certainly should never be modified for the sake of producing in his mind an unfounded hopefulness. They are official notifications to the friends, or even more to the public at large, and should be prepared solely with that fact in view. Limiting our consideration for the present to cases comparable to that which has recently attracted so much attention, it is obvious that by the tenor of bulletins not only may public confidence be seriously shaken, but financial crises may be hurried on and political forces liberated, whose work may be pregnant with important issues. Under these circumstances the physician or surgeon is met by the temptation so to word his bulletin as to produce the most favourable effect upon the public consonant with the most hopeful view of the case, and close upon this follows the more fatal temptation to avoid mention for a time of the graver symptoms, lest the general knowledge of their presence should hasten on some impending or dreaded evil. It is an open secret that such was the case recently. While the bulletins contained no mention of pyrexia, the private telegrams to the American Minister at St. James's spoke of recurrences of pyrexia each evening. Similarly it was by irregular or unofficial means that the public first learnt of the pulmonary affection of President GARFIELD, while it appeared that almost special pains were taken to avert any suspicion of blood-poisoning long after its existence was abundantly clear. In all this it is evident that the surgeons in charge were assuming unnecessary responsibility. It was surely enough to undertake the professional charge of a case which taxed to the utmost the powers of diagnosis and therapeusis; it was sufficiently onerous to be called upon, in the face of many millions of people, to record the daily progress of that case through its many variations; but the burden was greatly increased by the attempt to influence the public effect of the illness. To us, as onlookers, it is abundantly clear that a physician in assuming responsibility for the effect of his bulletin is trying to bear a burden too heavy for him, and we believe our American brethren on looking back will cordially agree with us in this view. It comes to this, then, that a bulletin should be "the truth, the whole truth, and nothing but the truth"; and "the truth" should be simply a record of facts, well observed and precisely stated. The responsibility for the use of those facts then rests with the users of them—on the proper shoulders. So soon as opinions are added, sources of fallacy and error creep in, and the bulletin itself becomes the subject of debate. But it may fairly be asked if all the facts, especially those of serious import, need be stated, as symptoms of gravity are often merely temporary, and their public notification might cause unnecessary alarm. We are free to admit that in private practice such considerations may well be allowed some weight, but in his more public capacity the physician must regard himself as called upon to give a strict record of *all* the facts. In this country it is the custom to make bulletins err, if at all, on the side of extreme care to state all the unfavourable symptoms in the case. The result is the public have full confidence that nothing is being concealed and kept back from them—that they know the worst; and there is no room subsequently for a suspicion that possibly the medical attendants had not been quite alive to the gravity of the symptoms. Further, we think that, under such circumstances as we are supposing, the official bulletins should be the only public communications of the medical attendants in reference to the case. Let others, if they like, discuss the facts published; those responsible for the management of the case should be satisfied with announcing them in the official bulletins. Only those most able to give opinions know the full danger of publicly expressing them, even on well selected facts, and the distortion such opinions are liable to undergo is notorious. But the public in reading bulletins want to be assured that they are put in possession as fully as may be of the actual facts of the case, and the physician or surgeon in charge may well content himself with the responsibility of stating them.

AN interesting memoir on the White Corpuscles of the Blood appears in the part just issued of the *Archives de Physiologie*, in which M. RENAUT describes the different

forms presented by the white corpuscles in different animals. In the river crayfish, for example, besides the ordinary lymph-corpuscles, there are many larger bodies with well-defined nuclei, the protoplasm of which contains large highly refracting granules, resembling in many respects the vitelline granules of the frog and other batrachia. These corpuscles have a sharply limited but thin exoplastic pellicle; and if a drop of such lymph be allowed to fall into a drop of a one per cent. solution of osmic acid, the white corpuscles are instantly fixed, with their pseudopodia or protoplasmic processes extended; and these processes can then be seen to perforate the thin membrane, now blackened with the acid. There are thus two kinds of white corpuscles in the decapod crustacea—the lymphoid corpuscles and the amœboid corpuscles. Do similar differences exist in the blood of vertebrata? In reply to this, M. RENAUT states that in the blood of all the vertebrata, from the cyclostome to the saurians, the white corpuscles are of two kinds: one, the ordinary white corpuscle, composed of hyaline protoplasm, presenting many short projecting points, with a nucleus undergoing gemmation and sending forth branched pseudopodia when placed under favourable conditions; the other containing numerous brilliant granules embedded in the protoplasm and surrounding the nucleus. These resemble the second form of corpuscle described above as existing in the lymph of the river crayfish, but differ from them in having no outer limiting layer of condensed protoplasm, or exoplasm, as HAECKEL has named it. The application of osmic acid shows that they may be subdivided into two other forms: one closely analogous to cells undergoing transformation into fat-cells, which present numerous granules, and stain black with osmic acid, and another set which contains granules that are not fatty, but which stain red with eosine. The best mode of demonstrating the existence of these three forms is to fix the blood in the rete mirabile of the capillary of the choroid in the posterior segment of the eye of a frog, by removing the anterior segment and exposing it to the vapour of osmic acid. At the expiration of twelve hours the eye is removed from the vapour, washed, the chorio-capillaris detached from the retina, and spread on glass; it is afterwards coloured with, and mounted in, hæmatoxylate of eosine. The corpuscles may then be studied, and the three forms of ordinary, granular, and fatty corpuscles can be easily distinguished. M. RENAUT finds that the white corpuscles of mammals generally, and of man in a state of health, all closely resemble each other, and are of the ordinary kind; but in disease, as in leucocythæmia, the white corpuscles are not only greatly increased in number, but vary considerably in size. Moreover, they are round, and present no pseudopodia. They are hyaline, and have a smooth, well-defined limiting membrane, and some of them have nuclei which have undergone fission, just as in a cell that is about to segment. Hence, he is of opinion that the white corpuscles multiply and increase in number whilst floating in the blood; other corpuscles may be observed, which are charged with granules of some proteid substance, resembling vitelline granules, or small masses of hæmoglobin; and, lastly, there are still other cells, which are charged with fat. M. RENAUT has made some observations on the development of the red corpuscles of the lamprey, and gives the following succession of forms:—White corpuscle with nucleus proliferating, and protoplasm, not limited by an exoplasmic layer; corpuscle with nucleus proliferating, the protoplasm forming an uncoloured disc, limited by an exoplasm; corpuscle with proliferating nucleus, protoplasm limited by an exoplasm, and forming a disc, more or less charged with hæmoglobin; red corpuscle with proliferating nucleus; and, finally, circular red corpuscle, with rounded nucleus.

THE annual report to the Government of India on the progress of the cinchona cultivation and its practical results is a document not only of great importance, but also of considerable interest. The success which was chronicled in previous reports has been well maintained under the superintendence of Dr. KING, who has the responsible charge of the cinchona cultivation in Bengal. It will be remembered that the object to which efforts hitherto have been chiefly directed is the manufacture of a cheap febrifuge from the bark of the cinchona succirubra. The plantations of this tree which are now in existence are so extensive as to suffice for present and probable requirements, so far as the febrifuge is concerned. They contain more than four millions of trees, and from them 267,335 lb. of red bark were obtained during the year. The yield per acre (1510 lb.) is not, however, considered to be very good; 9296 lb. of the febrifuge was made during the year, and 8653 lb. was consumed, 5500 lb. being used in the Government services and 3150 lb. sold to the public. The demand for the febrifuge steadily increases, a satisfactory proof of its value, and the total amount manufactured from the commencement to 31st March, 1881, is 36,639 lb.

Financially the enterprise, initiated with such pains by Mr. MARKHAM, must be regarded as a complete success. The actual profit on the year's working was 8 per cent. on the capital of the plantation. This does not, however, represent the whole gain of the year. The price of quinine was very high, and the cost of the 5550 lb., which would have been used by the Government had the febrifuge not been available, would not have been less than £48,000, while the cost of the febrifuge was only a sixth of the amount, representing a saving of at least £40,000.

The work has not, however, been confined to the production of the febrifuge. Mr. GAMMIE, who has been in charge of the Mungpoo factory, has conducted experiments with the object of increasing the amount obtained from the bark, and has succeeded in turning out a crystalline preparation of the febrifuge nearly as white as quinine itself. It is now under trial at several of the hospitals. A certain amount of quinine is required at the Government hospitals in addition to the febrifuge, and Mr. GAMMIE is now endeavouring to perfect a method for the economical extraction of quinine, and with a good promise of success. It is therefore considered important to increase the number of the trees which yield bark suitable for this purpose. One of the most valuable for this purpose is a hybrid calisaya, which appeared spontaneously in the plantations some years ago, and which, since its bark was found to be particularly valuable, has been carefully propagated. Another is the Ledgeriana variety of calisaya, and about 100,000 plants of this have been placed out. A small quantity of this bark, grown in India, was sent to the London market to test its value, and it obtained the high price of 10*s.* 10*d.* per lb.

From the facts of the report nothing would seem to be

more satisfactory than the progress of the cinchona cultivation in India. Some points in its conduct, however, have been severely criticised by Mr. J. E. HOWARD, the well-known quinine manufacturer, in a paper read before the recent meeting of the Pharmaceutical Congress at York. He deprecates especially the excessive cultivation of the cinchona succirubra, on account of its deterioration under culture. He exhibited specimens of the resinous variety of bark which used to be imported from South America and sold at a high price, though useless to the quinine manufacturers; they were exhibited to illustrate the state of degeneration to which Mr. HOWARD predicts the truest red bark in India will arrive by age, and towards which he believes considerable progress has already been made. Samples he has recently analysed from Ootacamund contained only ·86 and ·91 per cent. of quinine, but they contained 1·5 to 2·0 per cent. of cinchonidine and 3·5 to 4·0 per cent. of cinchonine. It will be observed, however, from the facts of the report to which we have called attention, that the red bark is cultivated solely for the production of the febrifuge, and for this even in its "deteriorated" state the analysis given by Mr. HOWARD shows that it is still well adapted. The work appears to be carried on under most careful supervision, the quality of the bark being constantly examined, and the recent efforts are directed to the cultivation of other varieties than the red bark.

An important point was raised by Mr. HOLMES in another paper read before the same Congress—namely, the desirability that other varieties of bark than those enumerated in the Pharmacopœia should be made officinal. The kinds of bark now cultivated in India, Java, Ceylon, and Jamaica are not recognised in the Pharmacopœia, and cannot therefore be used for pharmaceutical purposes, and the officinal bark of South American origin is often comparatively worthless, a point which will doubtless be taken into careful consideration at the approaching revision of the Pharmacopœia.

Annotations.

"Ne quid nimis."

THE CALENDAR OF THE ROYAL COLLEGE OF SURGEONS.

THE Calendar of the College has just been published, and contains much interesting matter to the members of the profession. There are now 16,140 members, and 1210 fellows, making a total of 17,350. Of the fellows, as many as 573 have obtained the honour by examination. There are also 978 licentiates in midwifery, and 497 licentiates in dental surgery. The Board of Examiners in Anatomy and Physiology has held seven meetings for the fellowship and thirty-nine for the membership during the past collegiate year; it has examined 120 candidates for the fellowship, 51 of whom passed, and 69 were referred for six months. For the membership there were examined 942, of which number 589 were successful, 318 were referred for three months, and 35 for six months. The Court of Examiners held two meetings for the examinations for the fellowship, and thirty-three meetings for the pass-examinations for the membership; of the 52 examined by them for the fellowship, 30 passed, and 22 were referred for one year. For the pass-membership there were 649 candidates; of this number 367 passed, 39 were approved in surgery and were required to qualify in medicine, 37 were approved in surgery and afterwards qualified in medicine, 243 were referred for six months, and 404 diplomas granted. The finances of the College are reported as follows:—The receipts during the year amounted to £16,848 17*s.* 6*d.*, the disbursements to £16,380 13*s.*, leaving a balance of £852 19*s.* 1*d.* The chief item in the receipts consists of fees paid by students on examinations—viz., £13,872 8*s.* The fees paid by members of Council on election, Court of Examiners and fellows by election, amounted to only £158 10*s.* Rents of chambers adjoining the College produced £1478; dividends on stock, £1075 9*s.* 5*d.* On the expenditure side we find fees to Council, Court and Boards of Examiners, £6761 13*s.*; salaries and wages, £4076 1*s.* 2*d.*; taxes, rates, diploma stamps, £1395 14*s.* 2*d.* The Barnard Davis collection cost £500. The Hunterian Festival and Oration, in addition to receipts from the fund, £112 15*s.* 2*d.*

"STUDENTS' BOARDING-HOUSES."

IN another column "Devoniensis" advocates the institution of boarding-houses for medical students in quiet streets near the hospitals. The suggestion is a good one, and, if not altogether novel, deserves to be supported. What seems to be required is a comfortable lodging in a well-conducted house, where students can enjoy the advantages of a common room, with private studies. The terms must be strictly moderate; and whilst it is on every account desirable that the young men should be subject to a certain code of domestic regulation, there ought not to be any appearance of restraint or any impracticable attempt to give the establishment the semblance of a "home." Medical students would not be likely to take kindly to the discipline of college life without its advantages. There is much, very much, that is mentally depressing and physically deteriorating in the daily duty of students of medicine. When in the intervals of his gloomy work the "medical student" dissipates somewhat riotously, every moralist is "down on him." It is altogether forgotten that young men with a fair share of animal spirits must and will find some vent for their energy, and that when they indulge in recreation it is likely to take some more than commonly boisterous form, because of the unwonted repression produced by the most lugubrious of surroundings. Prisoners are known to break out in paroxysms of rage every now and again from very stress of the monotony of their lives. So it is with the medical student; he is excessively lively in his leisure hours, because he is excessively borne down and depressed in his hours of attendance at lecture, in the wards of the hospital, and in the post-mortem and the dissecting-rooms. He has a special claim to consideration on the score of his unnatural surroundings, which are altogether alien to the spirit and genius of youth. Therefore we say his home must not be a very oppressive institution. If boarding-houses of the right class and kind can be provided they will constitute a boon to multitudes of students who are strangers in London, and they will supply a want which has long been keenly felt, and too long remained unsatisfied.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL.

THE increasing size of this school, and the determination of the governors to enlarge the existing hospital out-patient department, and utilise the school premises for this purpose, have for some time past rendered it imperative that new premises should be obtained. The site granted by the Duke of Bedford is in Chandos-street, immediately opposite the hospital, and the new school will be opened informally with a conversazione, at four o'clock on Monday, the 3rd of

October, to be followed by an old students' dinner. The building is in the free classic, without the eccentricities of the so-called Queen Anne style, both as regards its exterior and its internal fittings; and as far as regards good taste, efficiency, and administration to the manifold requirements of a modern school of medicine leaves nothing to be desired. The entire work has been carried out by Mr. J. J. Thomson, F.R.I.B.A., and reflects the highest credit on his skill as an architect, artist, and adapter. The miserable tenements in the immediate neighbourhood have been pulled down and Peabody buildings erected in their place, and the situation is comparatively free, open, and healthy. There is a central staircase, lighted from the roof; and the various lecture-theatres, laboratories, and class-rooms are most admirably arranged, and communicate with the staircase. The dissecting-room, perhaps the most happily devised of its kind, is, as is the post-mortem room, at the top of the building; and what communication there is with the hospital is effected by a subway under Chandos-street. The dissecting-room has an arched glass roof, supported by elegantly-designed iron girders, and its sanitation has been most carefully attended to. The library, students' room, and museum are very well arranged, and the introduction of a powerful hydraulic lift accommodates every floor of the new building most effectively. The warming and lighting are upon the most modern principles. The front is of red brick, with a high-pitched gable, surmounting a red cornice; and a somewhat decorative porch identifies the entrance. The cost of the building has been £11,000.

PIGEON VARIOLA.

SOME experiments have been made by M. Jolyet to determine the etiology and pathogeny of the variola or *picote* of pigeons, and also the mode in which the organism is invaded by the poison of some other virulent diseases. The examination of the blood of birds suffering from this disease (which presents the same four stages seen in variola in man) shows that it contains an immense number of living microbia, and this whether the disease was apparently spontaneous, or was the result of inoculation. Their appearance in the blood invariably precedes the first morbid symptoms. On the first and second, and sometimes on the third day after inoculation with the blood of another bird suffering from the disease no abnormal appearances are found in the blood. Towards the end of the third day the organisms appear, and rapidly increase on the following days, and when the first symptoms arise the blood presents myriads of active organisms; their maximum occurs at the time when the eruption makes its appearance on the skin, and after this, and during the period of the eruption, their number gradually lessens. The same organisms are found in great abundance in the pustule-contents, which possess the same power as the blood to give rise to the disease by inoculation. Hence it would seem that the pustulation of the skin is only one of the means of elimination, and it may be replaced by other means; for in some pigeons affected with the disease, although the other symptoms are the same, notwithstanding the bird dies from the affection, the eruption on the skin is completely absent. In these cases the post-mortem examination reveals an abundant pustulation in the intestine. Cultivated in decoction of pigeon the organisms multiply rapidly, whether they were taken from the pustules of the skin or from the blood, and are capable of giving rise to the disease. The blood and lymph, however, appear to be the liquids in which they multiply most readily, and in the latter more than in the former. The blood of human beings and of pigs, attacked with variola, contains so small a number of microbia that it seems difficult to attribute the disease to these organisms. So with anthrax. In some animals the blood contains only a few organisms, even when the creatures are dying. This is due to the fact that in these animals the organisms are multiplying in the lymph, and not in the blood. When the blood is almost normal, the lymph of the thoracic duct swarms with organisms, capable after cultivation of producing the disease. They are found abundantly also in the cerebro-spinal fluid. Their preponderance in the blood of the pigeon is to be accounted for by the slight development of the lymphatic system in birds. M. Jolyet promises a further communication on the subject of inoculation experiments with the pig and monkey.

UNQUALIFIED ASSISTANTS.

THE *Manchester Courier*, commenting somewhat severely on certain facts which came to light—our contemporary characterises them as "startling revelations made"—at a recent inquest, observes: "What the public will be most anxious to know is whether a medical man is at liberty to employ as his assistant a person who possesses no medical qualification whatever; and whether a sick person, confiding in the name and reputation of the principal, may be attended by an individual on his behalf so absolutely ignorant of the properties of medicine as practically to prescribe haphazard?" Those who are more familiar with the state of the law than the *Manchester Courier* is, or affects to be, will know only too well that the practice of employing unqualified assistants is one of the evils which medical reformers deplore, and are especially anxious to remove by those changes in the statute-book which the Royal Commission at length instituted is charged and expected to recommend. This practice is a fraud on the public and a grievous injury to the profession. The sick poor send for a "doctor," and, not knowing him personally, are attended by someone who represents the principal, without himself possessing a qualification. We cannot describe the proceeding as less than fraudulent, because the poor pay over their hardly earned money to be attended by the "doctor," and someone else of less worth in a practical sense is substituted. It would be well if a court of law could be induced to regard the proceeding as we regard it—namely, as "obtaining money under false pretences." Meanwhile, there are hundreds—nay, thousands, as our own advertising columns would show—of qualified men who cannot obtain employment as assistants solely because unqualified assistants can be engaged at a lower salary. Again, hundreds of able and fully-qualified young men would be only too glad to devote a year or two of their professional lives, after passing their examinations, and obtaining their diplomas or licences, to practical work among the poor and generally, as assistants, if only it were possible to obtain engagements on fair terms. An initiatory term of practice in private houses, after the completion of the required attendance at hospitals, is much needed, and most desirable to give young men some experience of the difficulties they will have to encounter in private practice among the poor and the lower middle classes, before themselves assuming responsibility. Since the abolition of apprenticeships no such opportunity exists. The reform of the abuses to which our contemporary points must begin in the Legislature. Unqualified men must be prevented from practising for gain, whether the fees paid be handed directly to the person attending the sick, or to a principal. It should be no excuse in the eye of the law for wrong-doing that an unqualified man acts as a "doctor" for gain under cover of a name which is not his own. Until the law begins to take cognisance of the person as well as the name, there is no hope that this grievance will be redressed. A medical man may keep fifteen or fifty dispensaries if he pleases, and leave unqualified assistants to conduct the business at each. It is only when a certificate is wanted the system breaks down.

EMBALMING.

THE origin of the practice of embalming is lost in antiquity, and of the many suggestions offered as to the motive for it the most plausible one, and the one still active, is the desire to preserve from the natural processes of destruction the forms of those specially worthy of honour. Whether or not any views of the immortality of the soul, or of the resurrection of the body, may have originally led to this practice we cannot pretend to discuss here. It is a custom singularly at variance with the operation of natural laws, but quite as obviously in harmony with the natural desires of the bereaved. It has excited but small attention in this country of recent years, though so great a man as William Hunter made strenuous efforts to perfect a system of embalming. At the present day the Italians are the great proficients in the art, which is mainly practised by professors of anatomy, who endeavour to keep their particular mode a profound secret, and let mystery screen from view the composition of the ingredients used. One element commonly employed is a salt of zinc or arsenic. The objects to be aimed at, in addition to the prime one of the delay or entire prevention of decomposition, are the maintenance of the natural contour and colour, and the smallest possible disturbance of the corpse. The Italian professors embalm without evisceration, injecting their fluids into the aorta, and by their preparations they are able to preserve the features quite unaltered, or rather with all the wrinkles and furrows of age or disease obliterated; the body assumes a pure white colour, and in a few hours the hardness of marble, and is then practically indestructible. We have not yet heard what method of embalming was employed in the case of General Garfield, but from the fact that the features had changed colour, we presume it was not the Italian, nor one so perfect in its results. The Italians still practise in some cases a process of petrifaction, by which corpses become so hard that they can be submitted to the sculptor's chisel and preserved as articles of furniture or vertu.

THE ELECTRIC LIGHT.

THE storage of that wonderful and invisible power, electricity, and its restoration in the correlated form of light, heat, or motion, which is now rendered practicable by Faure's accumulator, is a subject of surpassing interest, since it must appear to every thoughtful mind to inaugurate a new era in our domestic economy. What may not be anticipated in the future when it is already apparent that a small engine, the power supplied by which may easily be afforded by the wind or the river, can rapidly store up on a few sheets of lead force which, at the will of the weakest or most ignorant—by the mere shifting of a lever connected with a couple of wires—can either flood with dazzling light the largest room, or develop heat enough to melt the most refractory metal, or be converted into mechanical motion of any kind, degree, or direction, from the revolution of the wheel of a lady's sewing-machine to the propulsion of a tramcar? The difficulty hitherto experienced in regard to electricity has been, not to obtain it of high tension or in great quantity, but to retain and redistribute it; and now that this can be accomplished, its useful applications seem to be indefinitely multiplied. The chief obstacles that exist at present to its general introduction are the large amount of the outlay required for the accumulators or batteries, the trouble and expense attendant on their recharging, their bulk, the inconvenience of the acid in which the plates are immersed; and lastly, the waste, which amounts to about 10 per cent. per week. But though these circumstances militate against the batteries being kept in private houses, they could be easily met by a company who should construct large accumulators, and keep them constantly and fully charged. Experiment has shown that forty accumulators will maintain in full brilliancy for five hours ten incandescent lamps, burning in a vacuum, each equal to six gas burners. The prime cost of the forty accumulators is about £150, which is, no doubt, a large sum; but, on the other hand, when once purchased, the cost of recharging them is even at the present time only sixpence. The force that is accumulated in this way is roughly estimated as sufficient to drive an omnibus with twenty-four passengers for three hours. It is certain that no difficulty is experienced in regard to either the distribution or the uniformity of the illumination afforded by the electrical current thus stored up. A simple mechanical arrangement allows any individual lamp of a large chandelier to be extinguished by simply breaking contact, whilst the thread of carbon in the exhausted globes can as instantaneously be rendered incandescent by making contact and completing the current; and the absence of heat and of unconsumed products gives this method of illumination an immense advantage over every other. Some improvements will doubtless soon be made in the mode of diffusing the light, which is at present far too concentrated and glaring; opal shades appear to absorb too much of the light; but we think that glass globes might be made tinted of a light rose or of a yellow colour, which would abolish the ghastly and unpleasant light of which everyone now complains. Exposure to the electric light is probably not so dangerous for the eyes as was at one time supposed, since only one case has come to our knowledge in which serious results, such as inflammation of the optic nerve, followed exposure to it; and in that instance the lad was engaged in experimenting with it for several hours, and was much exposed to its influence.

THE LUMBAR PLEXUS.

THE distribution of the motor roots of the lumbar plexus in the muscles of the leg have been studied experimentally by MM. Paul Bert and Marcacci. The researches were carried out on dogs and cats, and the results have been communicated to the Société de Biologie. The animal was first deprived of sensation and motion by division of the medulla oblongata, the lumbar cord was then exposed, the nerve roots divided close to their origin, and the peripheral extremities attached to a thread, by which they could be raised to the excitor, so as to stimulate them without giving rise to any derived currents in the neighbouring roots. The skin of the limb was then removed, so that the precise muscles affected could be exactly observed. It was found that the first root of the lumbar plexus determines the contraction of the sartorius, the rectus, and the psoas, muscles which are closely connected in the dog and cat, and all of which flex the hip upon the trunk. The second root of the plexus excites contraction in the anterior portion of the vastus externus, a part of the tensor of the fascia lata, and the vastus internus—i.e., in the muscles which extend the leg on the thigh. The function of the third root is similar to that of the second, with some differences in detail. It excites part of the vastus externus, the anterior part only of the biceps, which is an extensor, while the posterior portion is a flexor. The fourth root causes movements in the posterior part of the biceps, the semi-tendinosus, and the semi-membranosus (flexors of the leg on the thigh), the second and third adductors of the thigh, and the extensors of the thigh. It thus innervates three kinds of movements, which are in no respect opposed or contradictory. The fifth root presides over the movement of the tail. From these results the experimenters conclude that there is evidently a systematic arrangement of the innervation of the limb at the origin of the nerves at the spinal cord; it is a functional systematisation—i.e., the motor filaments arising at a given level are distributed to

muscular masses, which act together and concur to produce an associated movement. In the second place (as Duchenne long ago demonstrated and as is now generally recognised), the anatomical unity of a muscle has no physiological correspondence. A single muscular mass may be in one part a flexor, and in another an extensor. But the nerve distribution corresponds to the function, in so far as the different roots, innervating the several functions, are concerned.

HOP-PICKING AND HOP-PICKERS.

HOP-PICKING may be a light and not disagreeable form of labour while it lasts, and in so far as it is work done in the open air, provided the weather be propitious, it may be not unhealthy in itself. When, however, we come to look at the class of hop-pickers, and to realise the conditions under which they live, it is impossible to avoid the feeling that there is much need of a serious endeavour to ameliorate their lives and surroundings. The sensational pictures recently sketched in the newspapers must of course be toned down by the reflection that these persons are not dirtier or more demoralised when they repair to the hop-field than they are at home. The truth is that the hop-picking season brings periodically under notice a mass of human filth and defilement which is not created for the occasion, but always exists hidden away—except at these annual "outings"—in the dark recesses of populous places. Society should not be more aghast at the disclosure than at the *fact* which the occasion brings to light. The families that go hop-picking may be the better for the change they obtain in that way, and could not possibly obtain in any other. If good huts or tents were provided for them, they would unquestionably be benefited; but it is time that some sanitary observances were imposed on them during their residence in the districts where they congregate. They may well prove carriers of disease. The fact that as yet no great epidemic has been distinctly traced to the annual migration does not remove the misgiving that it suggests. The officers of health of the localities whence these people go, and to which they presumably return, should be directed to the matter, while the sanitary authorities of the rural districts in which they sojourn during the hop-picking season have clearly a great and grave responsibility thrust upon them.

WOMAN'S PLACE IN NATURE.

M. DELAUNAY has summarised the evidence supplied by the physical organism of woman, in proof of her "inferiority" to man. There can be no question on this point in the mind of the impartial student of anatomy, human and comparative. It is, however, necessary to explain what is meant by "inferiority." In its conventional use, and the meaning commonly attached to it, we have no right—even in a purely scientific sense—to speak of woman as inferior. It is rather with her place in nature we should deal. All females are lower in the scale of development than males. M. Delaunay makes a reservation in this respect when treating of the females of certain forms of life—for example, insects, some fishes, and reptiles; but in doing so he falls into the common error of failing to keep in mind the *purpose* of the organism in reference to its ancestral or actual mode of life. In many lines of existence it is an advantage to be comparatively small and of little weight; and in the case of animals so situated the male is the smaller and the lighter. So is it with colour, appendages, form, and the capabilities generally; these must all be studied for the purpose of estimating a direct relation to the mode of life. When this is done, there will be found to be no exceptions to the rule that the male is superior—that is, superior in the sense of being better fitted for the purpose of the life of relation proper to the species, either in the history of its development or in its actual state. There is not, so far as we can see, anything new in what M. Delaunay has to say on the subject. The evidence he adduces, of course, goes to prove that women are not intended for the higher forms of intellectual work, but in all their activities to be the helpmeets of men. One fact he mentions is sufficiently interesting to be reproduced, and it may strike some readers as novel, though it has long been recognised as an instance of the essential inferiority of woman's work, even in departments which she is especially prone to look upon as her own. He cites the historic fact that although there has been and are wonderful examples of the skill of women as practical musicians, and they take much pleasure in music and devote much time to the acquisition of manual dexterity in playing on a variety of instruments, at the same time cultivating the sense of hearing and taste to a state of very high perfection, there has never been a great female composer! This is a significant circumstance, and might well form the topic of a homily in praise of that modesty which is not only the greatest glory of woman, but should be her protection against the misleading blandishments of her unsisterly sisters. Woman's place in nature is to "stand before" man, to be his "helpmeet," his counsellor, his friend in adversity as well as in prosperity, in the hour of sickness and weakness as in the time of health and strength; but she cannot usurp his place, and she is not his equal in stature of body or mind.

THE LIFE AND BUSTLE OF THE TOWN.

THOSE who have remained in London during the annual exodus, and afterwards until the beginning of the return, and those who are returning to town after a few weeks' absence, can scarcely fail to notice the tokens of life and bustle which make the great city different from all other cities and capitals throughout the world. We are not a lively or bustling people as compared with certain other nations, but there is more continuous, though somewhat lazy and lugubrious, "go" in us than in the resident population of any other capital. This is very noticeable on coming back from the Continent. We do not move quickly, but we seem to go on longer. Our energy would appear to be less spasmodic and better sustained than that which animates other people. It is impossible that the wear and tear of life, and the bustle which prevails in town, should not affect us. It must needs be that the nervous organism of the active dweller in London is more irritable and vibrates more rapidly than that of the average resident elsewhere, consequently it results that the nervous constitution of the citizen of the metropolis must be either more enduring or become worn out before that of the member of a community whose life is less exacting. There is not, we think, reason to suppose that the people of London do not accomplish as great and as good work as others or that they die earlier. It is therefore fair to assume either that the supply of mental and nervous force elicited by the demands made upon us is adequate, or that, as a race or class progressively moulded by the circumstances and conditions of life, Londoners are exceptionally strong and sound. We are disposed to believe both inferences to be true.

GLANDULAR OBSTRUCTION.

THE effect on a gland of obstruction to the escape of its secretion is a point in practical pathology on which experiment is capable of yielding important information. The effect on the liver and testicle of ligature of the ducts has been already studied by Charcot, Gombault, Brissaud, and others, while a recent investigation by Arnozan and Vaillard of Bordeaux has elucidated the effect of the same influence upon the parotid gland. Their experiments were made upon the dog. The progress of the changes which result from ligature of the duct appears to be as follows. The ducts

become gradually distended from the ligature into the ultimate glandular culs-de-sac. Up to the thirteenth day the dilatation is limited to the secretory lobar and lobular canals, and only reaches their ultimate limits at the end of a month. The walls of the dilated ducts become changed, and the alterations occur simultaneously in the epithelial lining and in the connective-tissue layer. The epithelial cells become multiplied and flattened, the protoplasm undergoes a translucent transformation, the degenerated cells desquamate, and fall into the cavity of the canals, and this ultimately becomes obliterated by a substance which appears to be concrete mucine. The connective-tissue layer becomes inflamed, and the lesion is propagated along the canals, and along the interlobular and interacinous connective tissue, which, by the thirteenth day, is infiltrated with embryonal cells. By the end of the month the new tissue is compact, and constitutes a condition of sclerosis. The glandular cells undergo atrophy, being thus compressed between the dilatation of the ducts on the one hand, and the contracting connective tissue on the other. The glandular atrophy and interstitial sclerosis appear to be the ultimate condition which results from ligature of the secretory duct.

MATRICULATION AT THE QUEEN'S COLLEGES.

THE question having arisen as to the academic rights of matriculated students of the Queen's Colleges in the Royal University, the President of the Queen's College, Belfast, has recently pointed out that the students who matriculate in October will be examined in the courses prescribed in the Queen's College Calendar, which are different from those in the scheme of the Royal University of Ireland. The session in which they shall then enter will, when completed, be reckoned to them in accordance with the rules and regulations of the Queen's University under which they are entered. Moreover, candidates for degrees in Medicine who matriculate in the Royal University must at the close of their first year pass the first University examination in the full Arts course. Further, any student entering the Queen's Colleges in October, who desires to compete for a scholarship in the Royal University, may matriculate in that University in December, and, should he gain honours at the matriculation examination, he will be eligible to compete for a scholarship in March. Should he fail, he will still retain his status as a matriculated student of the Queen's University.

HELP FOR SHOP-SERVERS.

THE *Standard* pours cold water on an attempt made by the assistants in retail shops generally to secure the aid of the Legislature on their behalf, and to shorten the hours of their labour. The crushing argument brought to bear against the "ardent young men" who look for deliverance by the aid of a league—formed to petition Parliament rather than to "Boycott" their employers—is epitomised as follows: "Everybody who knows anything of this subject [which we presume the "ardent young men" in shops do not] is aware that the working classes have an unfortunate habit of going out to make their purchases at hours which are oppressive to those who have to serve them, especially on Saturday night." May we suggest for the consideration of the *Standard*, what will probably have occurred to "everybody [else] who knows anything of this subject," that the "unfortunate habit" of which our contemporary complains, and which it apparently regards as incurable, is likely to be brought to a sharp conclusion when once the shops are closed by Act of Parliament. Everybody knows that until the public-houses were closed at a particular—though still late—hour at night, the multitude had an "unfortunate habit" of frequenting these establishments until the small hours. Legislation to protect the labour of shop-servers is not only the best, but the only remedy for their wrongs. It is useless striving to influence the public. As long as shops are open at late hours there will be shopping at late hours, and if all the shopkeepers in a neighbourhood were to agree to close their establishments at a reasonable hour, it would quickly occur to some enterprising tradesman to open a shop in the locality with a view to profit by the custom of those who would like to defer their purchases as long as possible. In short, nothing except an Act of Parliament will serve the purpose shop assistants have in view, and we warmly wish them success in their loyal endeavours. The preference for petitioning the Legislature instead of simply multiplying trades unions is greatly in their favour, and should command the support of all who can help them.

STARVING CHILDREN.

DR. H. TIRARD, physician for out-patients at the Evelina Hospital for Sick Children, has drawn attention to the probability that many of the infants brought as out-patients to the hospitals and dispensaries, until at length they waste away and die, are, notwithstanding the protestations of their mothers, or the women who bring them, *starved*. This is a sad possibility, but it cannot be denied that many of the cases classed, and perhaps certified, as suffering from "marasmus," are of a nature to give rise to suspicion. They do not present any marked symptoms of disease, and they grow thin and perish with all the indications of starvation, which is set down to the disease, but may be the result of wilful deprivation of food. It would be a most discouraging circumstance if it should be found that the "out-patient" departments of hospitals and dispensaries afford special facilities for this form of infanticide. We are glad to hear that the St. Saviour's Board of Guardians have the matter under consideration, and are investigating some cases in which suspicion has been aroused. It would be well if the question received serious attention at the hands of the Local Government Board. The physicians and surgeons of medical charities generally will do well to be on their guard against imposition of the kind alleged to be practised on their credulity. Dr. Tirard has done good service by raising the question.

EARLY EXPERIMENTS IN BOVINE INOCULATION.

IT is generally supposed that the attempt to prevent the contagious diseases of animals by prophylactic inoculation, after the manner of vaccination, is entirely a result of the latest development of pathological science. M. Bouley, however, at a recent meeting of the Académie de Médecine pointed out that this is an error. In 1852 a similar attempt was made in Holland. The experiments were designed to confer immunity against the contagious pleuro-pneumonia, the infectious nature of which, and the protection conferred by an attack, however mild, were pointed out in 1850 by a French Commission appointed at the suggestion of M. J. B. Dumas. The Dutch experiments, however, failed completely, probably in consequence of the mode of inoculation. The place selected was the loose skin below the neck, where the subcutaneous tissue is abundant. When the virus of pleuro-pneumonia is inoculated into such loose cellular tissue, it causes a rapid inflammatory infiltration of such intensity that gangrene and death almost certainly ensue. If, however, the inoculation is made in a situation in which the subcutaneous cellular tissue is dense and scanty, the local effects are slight; the animals escape the immediate results of the inoculation, and acquire the desired immunity. This was recognised a little later by a Dutch observer, Willems de Starrett, who chose the root of the tail as the place of inoculation. Of sixteen oxen inoculated in the

throat, twelve died from the local process. Of sixteen others which were inoculated on the tail, all survived; and in all subsequent inoculation in the neck had no effect.

DEATH OF DR. A. CARTE.

DR. ALEXANDER CARTE died at his residence in Northbrook-road, Dublin, on Sept. 25th, at an advanced age. Deceased was a graduate in medicine of the University of Dublin, a member of the Royal Irish Academy, a Fellow of the Linnean Society, and obtained the Fellowship of the Royal College of Surgeons in Ireland in 1844; and was also an ex-member of council of the same body. Dr. Carte formerly held the curatorship of the Royal College of Surgeons, but resigned it in 1851, when he was appointed Director of the Natural History Museum of the Royal Dublin Society, which he occupied until his decease. His name will be familiar as the inventor of the compressor for aneurism.

CHOLERA AMONGST OUR TROOPS IN INDIA.

THE cholera returns given below for the twenty-four hours ending 10 A.M., Aug. 31st, quoted from the *Civil and Military Gazette*, Lahore City, Sept. 1st, 1881, show, we are glad to say, some improvement:—Lahore City: 25 seizures; 9 deaths. Anarkulli: 15 seizures; 9 deaths. (This includes 1 seizure and 4 deaths in the central gaol.) Meean Meer: 1 seizure; 1 death. Lahore district: 15 seizures; 5 deaths. All the English troops have gone to Chunnoo (Mooltan), 150 miles from Fort Lahore.

"PRESERVED VEGETABLES AGAIN."

IN another column we print an interesting and important letter from Mr. Hehner, the well-known analyst, on the above subject. He endorses the opinion expressed in THE LANCET as to the expediency of abandoning the practice of packing preserved vegetables and food generally in *tins*, and he adduces chemical proof of the fact that the tin is dissolved, and acts injuriously—even toxically—in the form of *stannous* hydrate.

ABERDEEN ANATOMICAL SCHOOL.

THE new anatomical buildings at Aberdeen University are, we understand, fast approaching completion, and will be ready by the beginning of the winter session, when they will be opened with an introductory address by Professor Struthers.

EDINBURGH students will hear with much regret of the death of Mr. A. B. Stirling, Assistant Conservator of the Anatomical Museum of the University. He was seized with hemiplegia a few weeks ago, and died on Sept. 22nd. A man of great mechanical originality, his beautiful injections and microscopical sections are well known to the profession. But he was much more than a mere mechanical anatomist. He devised many new methods, became an accomplished practical microscopist, and invented a microtome, which has proved of the greatest service in microscopic research. His injections and microscopic preparations found their way into the collections of most of the anatomical and physiological teachers in this country. His knowledge of the habits and structure of fish, more especially of the salmonidæ, led him to take a keen interest in the "fungus disease" affecting salmon, which has decimated the Tweed and other of our rivers, and he communicated to the Royal Society of Edinburgh a series of memoirs on this disease, which contain the fullest and most exact information on its pathology that has yet been published.

THE Social Science Congress will assemble this year in Dublin, and the inaugural address will be delivered on the 3rd inst., by Lord O'Hagan, Lord Chancellor of Ireland. The various sections will meet in the new buildings, Trinity College, and conversaziones will be held at the Mansion House, Royal College of Surgeons, and the Royal Dublin Society. The special questions to be discussed will include compulsory vaccination, hospital control, notification of infectious diseases, and other subjects of importance in relation to sanitary reform. Dr. Cameron, M.P., the president of the Health Department, will deliver an address on Oct. 6th.

THE death is announced of Mr. John Postgate, F.R.C.S. Eng., Professor of Medical Jurisprudence at Queen's College, Birmingham. Mr. Postgate, it will be remembered, interested himself greatly in the movement to check adulteration of food and drugs, and was largely instrumental in obtaining the passing of the Act to that end in 1872. He also made important contributions to the literature of adulteration.

THE Transactions of the International Medical Congress, in three large volumes, will, we are informed, in all probability be ready for delivery to members before the expiration of the present year—another proof, if one were wanting, of the ability and unceasing energy of the Hon. Secretary, Sir William McCormac.

A MEETING was held on Wednesday at the residence of Mr. Hewitt, Lancaster Gate, with the view of founding an association, having as its object the suppression of illegal medical practice. A committee was appointed to carry out the necessary details.

THE *Times* says: "The Court St. Martin, No. 1693, Ancient Order of Foresters, have discontinued the use of a club doctor, and are now making their medical arrangements through the various dispensaries recently established by the new 'Metropolitan Provident Medical Association.'"

THE total amount of the Hospital Saturday street collection this year has exceeded by £717 that of 1880, which realised £1398. The sum accruing from contributions in workshops is also proportionately larger, and is estimated at close upon £7000.

THE annual public address in connexion with the Medical Society, University College, is announced to be delivered by Dr. Russell Reynolds in the Botanical Theatre on Oct. 12th, at 8 P.M. The subject will be "Specialism in Medicine."

A MEMBER of the International Medical Congress, Dr. W. Warren Green, of Portland, Maine, died on his voyage home in the steamer *Parthia*. He was buried at sea.

GERMAN Conservatives and Liberals alike appear to be animated with a desire to make memorable the approaching sixtieth birthday of their distinguished countryman, Virchow.

AN inquest was concluded on Monday at Bristol on the body of a woman who died of puerperal fever. It appeared that four other women, attended by the same midwife, had previously succumbed to the same malady. The attendance on the last case, though against the warning of the medical officer of health, was accompanied by circumstances which the jury considered warranted them in exonerating the midwife from blame.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Neots, Stamford, Caxton, and Arrington Rural, and the St. Neots Combined Sanitary Districts, and the Whittlesey Rural.—Dr. Syson's report for 1880, for the foregoing districts, is not so much a detailed report on the conditions of the particular districts as a general essay on certain sanitary wants and on the sanitary position of districts of the class in question which the particular districts serve him as a peg to hang his observations on. The report is not the less useful on this account, but to the outsider may, indeed, prove to be even more useful. It may be gathered, however, from the report that the districts to which it presumably refers make some headway in sanitary matters, and that, notwithstanding difficulties which have to be encountered, partly from old-standing habits and modes of thought and partly from existing bad times, the promise for the future is, on the whole, good. Dr. Syson writes of the evident benefits arising from the constant visits and supervision of the inspectors of nuisances which "have caused a visible amount of careful cleanliness which was not apparent when active sanitary work was commenced by the sanitary authorities some nine years ago." He states, also, that "the sanitary inspectors are now looked upon rather in the light of friends than enemies, and their advice and assistance are frequently sought." Writing of the privy system usually adopted in rural and small town districts, and a disgusting form of which is conspicuously adhered to in the districts named at the head of the reports, he regards the common privy as, perhaps, the most potent of evil influences acting upon the populations of the districts, and craves for such amendment of the sanitary law as would give greater powers to sanitary authorities in dealing with the evil. Nevertheless, even with the law as it is, he can describe the introduction of improved privies in certain districts, although "the number of bad and faulty ones is still legion." That the sanitary authorities should have at all made impression upon the execrable common privy system is much to their credit and the credit of their medical officer of health. "Next to privies," says Dr. Syson, "the drainage arrangements, public and private, require attention." Upon this subject he has the following observations, somewhat unguarded, perhaps, in so far as they refer to the pollution of streams:—"In country places, and where there are gardens, a little trouble on the part of the occupier will render drains unnecessary; but the difficulty is to get them to take that trouble. Still, one and all your inspectors are constantly urging and showing how slops, &c., should be utilised, and with slow but sure effect. I hardly know of any streams used for drinking purposes that are polluted with sewage, and therefore—save in a few cases where this does occur—I have not urged general sewage arrangements upon your notice. I think that the drainage question, as well as the water question, demands very careful national attention, and it does not seem fair to compel a place here and there to incur a large and often apparently useless expenditure in providing sewage arrangements and their costly appendages, while we know that every town and every village, with a very slight percentage of exceptions, are in the same state. Is it right that a village on one side of a stream, with its few gallons of sewage, should be compelled to provide sewers and sewer farms, while a town on the opposite side is allowed to pour its large quantity into the same river without let or hindrance? In many cases the sewage turned into our rivers is not doing the slightest harm to health. It is wasteful and it is unlawful, and generally the sewers themselves are radically defective and positive nuisances, but the river pollution is the least part of the evil. I do not want for one moment to defend river pollution, but I urge that while each case must be considered on its merits the whole question should be considered imperially, and not haphazard. Neither is it right that the medical officer of health should have so much responsibility as is now thrown upon him. A proper system of domestic conservancy would do away with all need for sewers in most rural parishes. In compact, populous villages and towns, properly laid and well-ventilated sewers would prove a great boon, and the comfort and cleanliness following in their train would soon disarm opposition and prejudice. But, with all respect for sanitary engineers in general, I do not think enough care is yet taken to ensure perfect sewers and perfect ventilation—i.e., sewers in which there is a constant flow and no chance of stoppages, and through which fresh air, not sewer gas, is constantly coursing." The difficulties of water-supply in rural districts, particularly where the practice exists of placing privies, cesspools, drains, and wells cheek by jowl claim Dr. Syson's attention; but most persons who know the circumstances will agree in his observation that "improved drainage and perfect middens would go a very long way to reduce our water difficulties; but at present I have often to stay my hand and moderate my advice, for were all polluted wells closed there would be a water-famine in your districts, and no supplies available." Dr. Syson's remarks on overcrowding deserve attention. It speaks much for the enthusiasm which he entertains for his work that he has faith that the oft-repeated phrase, begotten of stump oratory, "*Sanitas sanitatum omnia sanitas*," may eventually be justified in politics.

Dublin.—Dr. Cameron, in his report for August, states that the deaths within the municipal area during the four weeks ending August 27th were in the ratio of 20·27 per 1000 of the population; and that the mortality from the seven principal zymotic diseases was, in the entire registration district, in the ratio of 2·3 per 1000. It is gratifying to learn that since the registration of deaths has been even somewhat accurately carried out in Dublin, the state of the public health has never been so satisfactory as during last month. As compared with August, 1880, last month exhibits a most extraordinary contrast; for example, the death-rate from all causes per 1000 in August, 1880, was 39·27, as compared with 20·27 this year; the death-rate from the seven principal contagious diseases was 10·33, against 2·62; the admissions of contagious diseases to hospitals were 158, against 88; and the number of deaths from zymotic diseases was 227, as contrasted with 57. This remarkable improvement is to a great extent due to the sanitary work performed during the past two years.

St. Asaph (Rural).—Dr. Lloyd Roberts reports for this district in 1880 a death-rate of 17·4 per 1000 living, and a birth-rate of 27·6. The birth-rate is equal to the average; the death-rate is considerably less, and the lowest which has hitherto been recorded. The sanitary work of the district was uniformly carried out during the year, and works of drainage and water-supply completed or pushed forward in several localities. Cases of infectious diseases were followed up with a view of ascertaining their origin and limiting their spread; but there was no prevalence of this class of diseases to call for particular remark. Some interesting observations are made, however, on the occurrence of cases of diphtheria in St. Asaph, and previous occurrences of the disease in the neighbouring uplands. Dr. Roberts adds an appendix to his report, addressed to the unprofessional reader, and designed to clear up difficulties which he might feel in respect of some of the technical subjects dealt with in the report.

Stratford-on-Avon Combination of Rural Sanitary Authorities.—Mr. Fosbroke, jun., in his report for this combined sanitary district for 1880, states that the combination is formed of the three rural sanitary districts of Alcester, Evesham, and Stratford-on-Avon, the population in 1871 amounting to 44,059, with probably little change in number since the census of that year. He gives for 1880 a birth-rate of 26·6 per 1000 living, and a death-rate of 15·7, the corresponding rates for the whole of England and Wales having been 34·6 and 20·7. Mr. Fosbroke, commenting on an observation of the Registrar-General to the effect that "fevers" are being slowly but surely stamped out, remarks that it would be an easy matter to name parts of the combined district under his charge where typhoid fever was once prevalent, but from which, with improved sanitary conditions, more especially the provision of wholesome water, the disease has disappeared. This district is one of those which escaped any serious visitation from diarrhœa in 1880. It would appear that an arrangement has been made by the Alcester and Evesham rural sanitary authorities with medical men practising in their districts, in virtue of which the medical men notify to the authorities all cases of small-pox, scarlatina, "fever," and diphtheria which come to their knowledge, and receive from the authority for this information a fee of half-a-crown *per case*. Mr. Fosbroke states that

this arrangement works "most satisfactorily," and has been scrupulously fulfilled, "no difficulties having occurred in carrying it out." The one drawback to the excellent use of the information given to the sanitary authority of the existence of cases of infectious disease appears to be the want of sufficient hospital accommodation. The use to which a wooden hut has been placed in the Alcester district, originally erected for small-pox, but since adapted to the reception of other infectious diseases, indicates that proper hospital provision would be highly appreciated in the combined district. On the important subject of the excrement disposal of schools, Mr. Fosbroke states that some improvement has been made in his district; and he advocates the removal of all excrementitious refuse from school premises at intervals not exceeding one week. He directs attention also to the desirability of the windows and ventilators of schools being opened during the absence of the scholars. He recommends, too, the periodical fumigation of schools. The principal nuisances dealt with in rural districts, Mr. Fosbroke says, "are those arising from ash-pit privies." He gives his utmost efforts to obtaining the introduction of pail privies, and not without some success; or, in face of the "deeply-rooted predilection for midden closets" by some builders, to the construction of privy vaults, small, and situated entirely above ground. He regards the improvement of the privy system as one of the most essential elements in the sanitary amendment of his district. Mr. Fosbroke observes that he is at a loss to understand why the sanitary arrangement of dairies should not have been entrusted to health authorities. He is not the only sanitary worker who is at a loss when confronted with the same question.

Greenock.—Dr. Wallace reports for the four weeks ending the 30th July a total mortality equal to an annual rate of 18·9 per 1000 of the population. Typhus still lingers in the place.

The Dungannon Guardians have applied to the Local Government Board to sanction a loan of £3500 for the construction of sewerage works in the town of Dungannon; and an inquiry was held last week by the engineering inspector of the Board to obtain the necessary evidence.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The rate of mortality in our large towns, although slightly higher, continues unusually low for the season. During the week ending last Saturday 4811 births and 2655 deaths were registered in twenty of the large English towns, having a population little short of eight millions of persons. The annual death-rate in these towns, which had been equal to 18·1 and 17·3 per 1000 in the two preceding weeks, rose again to 18·2 last week. The lowest rates in these towns last week were 15·0 in Bradford, 15·1 in Leeds, and 15·2 in Birmingham; the rates in the other towns ranged upwards to 23·2 in Liverpool, 24·3 in Hull, and 25·2 in Manchester. The deaths referred to the principal zymotic diseases in the twenty towns further declined to 427; they included 110 from scarlet fever, 103 from diarrhœa, 73 from fever (principally enteric), 53 from whooping-cough, 39 from measles, 28 from small-pox, and 21 from diphtheria. The aggregate death-rate from these diseases was lowest in Brighton and Norwich, and highest in Nottingham and Hull. The greatest fatality from scarlet fever occurred in Hull, Nottingham, and Bradford; no fewer than 197 deaths from this disease were registered in Hull during the twelve weeks ending last Saturday, including 22 last week. Of the 21 deaths from diphtheria, 14 occurred in London, 5 in Portsmouth, and 2 in Birmingham. The highest death-rates from "fever" were recorded in Liverpool, Portsmouth, and Newcastle-upon-Tyne. Small-pox caused 26 more deaths in London, 1 in Oldham, and 1 in Newcastle-upon-Tyne. The number of small-pox patients in the metropolitan asylum hospitals, which had been 582 and 528 on the two previous Saturdays, further declined to 476 at the end of last week; these included 115 in the *Atlas* hospital ship, and 36 in the Convalescent Camp Hospital at Darenth. The new cases admitted to these hospitals rose to 84 last week from 68 in the previous week. The deaths referred to diseases of the respiratory organs in London, which had increased from 115 to 156 in the three previous weeks, further rose to 164 last week, but were 21 below the corrected average weekly number. The causes of 56, or 2·1 per cent., of the deaths in the twenty towns last week were not certified either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths did not exceed 0·9 per cent. in London, but was equal to 3·3 per cent. in the nineteen provincial towns. All the causes of death were duly certified in Brighton, Portsmouth, Plymouth, and Wolverhampton; while the proportion of uncertified deaths was largest in Salford, Sheffield, and Newcastle-upon-Tyne.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in eight of the largest Scotch towns, which had been equal to 18·8 and 18·0 in the two preceding weeks, was 18·2 last week, and corresponded with the average rate that prevailed in the twenty large English towns. The rates in the eight Scotch towns ranged from 7·0 and 12·8 in Perth and Aberdeen, to 20·0 and 20·5 in Edinburgh and Paisley. The deaths referred to the principal zymotic diseases in the eight towns were 79 last week, and showed an increase of 6 upon the low number in the previous week; of these 27 resulted from diarrhœa, 14 from scarlet fever, 13 from "fever," 12 from diphtheria, 10 from whooping-cough, 3 from measles, and not one from small-pox. The annual death-rate from these zymotic diseases averaged 3·4 per 1000 in the eight towns, and exceeded by 0·5 the average rate from the same diseases in the twenty English towns. The 27 fatal cases of diarrhœa showed a further slight decline from recent weekly numbers; whilst the deaths from scarlet fever showed a slight increase upon the numbers returned in the two previous weeks. The deaths referred to "fever" (typhus, enteric, or simple), which had been 12 and 10 in the two previous weeks, rose to 13 last week. The fatal cases of diphtheria were also more numerous; 10 of the 12 were returned in Glasgow. The deaths referred to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy), which had been 80 and 79 in the two previous weeks, were 78 last week; these were equal to an annual rate of 3·4 per 1000, which exceeded the rate that prevailed from the same causes in London.

HEALTH OF DUBLIN.

The death-rate in Dublin further increased to 22·8 last week from 16·6, 19·3, and 21·9 in the three preceding weeks. During the twelve weeks ending last Saturday the death-rate in the city averaged 20·2, against 20·8 in London and 17·0 in Edinburgh. The 153 deaths in the city last week showed a further increase of 6 upon the low numbers returned in recent weeks; they included, however, but 7 referred to the principal zymotic diseases, of which 4 resulted from fever (typhus, enteric, or simple), 2 from diarrhœa, and 1 from scarlet fever. The annual death-rate from these zymotic diseases did not exceed 1·1 per 1000, while the rate from the same causes was equal to 2·9 in London and 4·1 in Edinburgh. The deaths referred to "fever," which had been 5 and 3 in the two preceding weeks, were 4 last week, and were equal to a rate somewhat exceeding that which prevailed from the same cause in the twenty English towns. The 2 fatal cases of diarrhœa showed a decline of 5 from the number in the preceding week. Although the deaths at all ages last week showed an increase, those both of infants and of elderly persons were less numerous; it follows, therefore, that a very considerable increase must have occurred among the deaths of children and adults aged 1 and under 60 years.

HEALTH STATISTICS OF IRISH REFORMATORY AND INDUSTRIAL SCHOOLS.

The inspector of reformatory and industrial schools in Ireland has just issued his nineteenth annual report, dealing with the year 1880. It appears that between six and seven thousand children are now being educated in the reformatory and industrial schools of Ireland, and few will be inclined to disagree with the inspector when he asserts that "it is all important that the health as well as the training of the children should be most carefully attended to." On the 31st December last there were 1160 children in reformatory schools, of whom 928 were boys and 232 girls. Those numbers are small, but the seven deaths recorded during the year among these children give a death-rate of 6·2 per 1000, which very slightly exceeds the normal death-rate among children at similar ages. According to the English Life Table the mean death-rate among children aged between five and ten years is 5·2 per 1000. The numbers of children in the fifty-six industrial schools at the end of last year were 5699, showing an increase of 587 upon the number at the

end of the previous year. Among the children under orders of detention, 66 deaths occurred during last year; 31 were of boys and 35 of girls. The report states that the death-rate in those schools was 10·7 per 1000 in 1880, but we are not told how this calculation is arrived at, and the proportion of deaths to the mean of numbers of children under detention at the beginning and end of the year is 11·3 per 1000. Now, this rate is, as we have seen, more than double the normal rate, according to the English Life Table; it is, however, some satisfaction to know even this high rate shows a considerable decline from that which prevailed in the previous year, which was no less than 13·2. We have looked in vain in the report for a summary table showing the average numbers resident in these schools during the sixteen years of their existence, and of the deaths recorded in each year. Such a table would afford the means of observing the vital statistics of these schools during a series of years. It is much to be regretted that full advantage is not taken of the opportunities afforded by the detention of these children to record observations, which would possess a general value as well as being useful to those having the medical superintendence of similar institutions. In the tables of the report before us no other clue to the ages of the population of the reformatory and industrial schools is given than the ages at admission. In all mortality statistics the ages of the population under observation are of the first importance; without this element it is impossible to calculate a standard by which to compare the recorded death-rate. With regard to the death-rate in these Irish schools in 1880 the inspector expresses satisfaction at the decline from the rate that prevailed in previous years, and asserts that it was lower than in "most similar institutions." We seriously doubt whether this assertion could be established, and it is certain that the rate was double the normal rate in an English population of similar ages. With regard to the sixty-six deaths in 1880 we are told that, as in previous years, the great majority of the deaths were from "scrofula in its different phases"; more than half the deaths were from consumption and tuberculosis, and ten were from brain disease. It is beyond question that a large proportion of the children admitted to these schools are constitutionally unsound from inherited disease, or from disease acquired through neglect and unfavourable conditions during infancy and early childhood. It is an interesting problem how far, in their effect upon the sickness and mortality rates of these children, these unfavourable conditions are counterbalanced by what should be the exceptionally favourable conditions which surround them during their residence in these schools. One of the advantages of such residence should be comparative immunity from infection by the ordinary contagious diseases of children. It is unsatisfactory to find, however, that during 1880 no less than 10 of the 66 deaths in the industrial schools resulted from the principal zymotic diseases, including 6 from scarlet fever, 2 from "fever," 1 from whooping-cough, and 1 from English cholera. Would it not be possible to organise a system of sickness returns for these and similar institutions, and to publish the results?

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

BRIGHTON SANITARY EXHIBITION.

On the advice of Dr. B. W. Richardson, the executive committee have decided to hold a health congress in connexion with the projected sanitary and scientific exhibition at Brighton in December next. The Pavilion Committee resolved on Monday to recommend the Town Council to grant the promoters the free use of the whole of the Pavilion buildings, including the Dome and the Corn Exchange, for the week.

CHOLERA IN THE EAST.

Cholera is declining at Aden. The Sanitary Commission at Alexandria, having received an official intimation of the existence of the disease amongst the pilgrims at Mecca, have ordered the suspension of communication between the Arabian and Egyptian coasts.

Dr. Robert Pringle, of H.M. Bengal Army and Superintendent of Vaccination, North-West Provinces of India, has reprinted, in convenient pamphlet form, his papers on Small-Pox and Vaccination in India, and chiefly in the Bengal Presidency, on the Possibility of Stamping-out Small-pox, illustrated by three modes of procedure, and on the Synchronism of Variola and Vaccinia, &c. The particulars Dr. Pringle gives of the prevalence of small-pox in India, and the relative advantages of inoculation and vaccination there, deserve close attention.

A Russian paper gives the particulars of a remarkable malady which attacked the whole of the garrison of Usurgeti in the Caucasus. The medical officer at Kutais having been sent for, an investigation into the circumstances attending the outbreak was made, with the result of tracing the evil effects to the food, especially the flour, which on being given to a pig, produced in that animal symptoms similar to those which had characterised the illness experienced by the soldiers.

The yellow fever epidemic at Barbadoes shows no sign of abatement. An average of seventy new cases amongst the native population are reported weekly, about one-fourth being fatal. In August 358 cases are stated to have occurred in Bridgetown alone. Trinidad is now threatened.

THE SERVICES.

STATION HOSPITALS IN INDIA.

The Government of India have issued the following General Order, authorising the establishment of military hospitals on the Station Hospital system:—"Simla, Aug. 20th, 1881. In continuation of India Army Circulars, clause 25, 1881, it is notified that all hospitals for British troops in the Bengal Presidency shall in future be organised and conducted as Station Hospitals, on the principles laid down in the Regulations for the Medical Department of Her Majesty's Army, dated War Office, 1st November, 1878. The system will be introduced at once at the stations where the present buildings are adapted for the purpose—viz., Calcutta, Dum Dum, Barrackpore, Darjeeling, Allahabad, Fort Allahabad, Dinapore, Benares, Chunar, Fort Muchi Bawn, Sitapur, Fayzabad, Bareilly, Moradabad, Shajahanpur, Naini Tal, Ranhiket, Jabbulpore, Saugor, Nowgong, Pachmarhain, Morar, Fortress Gwalior, Jhansi, Fatigarh, Agra, Muttra, Delhi, Landour, Roorkee, Chakrata, Jullundur, Kasauli, Sabathu, Dagshai, Jutogh, Solon, Fort Lahore, Fort Kangra, Ferozepore, Mooltan, Armritsar, Dalhousie, Fort Attock, Murree, Sialkot, Campbelpore, and Nowshera. The arrangements to be adopted at the remaining stations occupied by British troops will be notified hereafter."

Surgeon-Major John Coates, M.D., has been appointed Medical Officer to the School of Musketry, Hythe, vice Deputy Surgeon-General J. Crerar, transferred to the Royal Military Asylum, Chelsea.

Surgeon-General R. Gilborne is under orders to embark for Bombay in H.M. Troopship *Crocodile* on the 7th inst.; to relieve Surgeon-General Fogo as Principal Medical Officer with the Government of Bombay.

Surgeon-Major W. Gasteen succeeds Surgeon-Major Sandford Moore in the command of the Depôt, Army Hospital Corps, at Aldershot.

The death is announced of Surgeon S. W. Algo, R.N., H.M.S. *Woodlark*, at Muscat, in the Persian Gulf, from an overdose of hydrate of chloral.

ADMIRALTY.—Staff-Surgeon Henry Clarke has been placed on the retired list of his rank from September 20th. Staff-Surgeon John Sampson Levis, M.D., has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet, with seniority of August 19th, 1881. Staff-Surgeon Edward Mulcahay has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet, with seniority of September 17th, 1881. Staff-Surgeon Edward Meade, to the *President*, for temporary service in the Royal Victoria Yard. Surgeon George Smith, to the *President*, for temporary service in Royal Victoria Yard.

MR. RICHARD AXFORD, M.R.C.S., has been placed on the Commission of the Peace for the borough of Bridgwater.

THE will of the late Dr. Humphry Sandwith, C.B., has been proved, the personal estate amounting to nearly £6000.

THE annual ball in aid of the Cork Lying-in Hospital will be held on Friday, the 7th inst., at the Assembly Rooms, Cork.

Correspondence.

"Audi alteram partem."

MR. J. C. ORCHARD'S REFORMS IN MEDICAL EDUCATION.

To the Editor of THE LANCET.

SIR,—I have read with feelings of astonishment, not unmingled with amusement, the striking reforms in medical education proposed by Mr. J. C. Orchard, L.R.C.S. Ed.[1] His estimate of the mental and, indeed, physical capacity of the average medical student may be, doubtless, based on personal experience; but, I venture to say, is not applicable to the great majority of that class. His ideal student is indeed a delicate growth whose limited course of study is only to be pursued during the winter months, in order that he may refresh his exhausted mind and body in "the green fields and cool sylvan solitudes of the country" during the summer session months, for which consummation we are told he "counts the days, nay, the very hours."

I do not know whether Mr. Orchard studied as well as qualified in Edinburgh. If so, he must be aware that, the winter session ending in March, the overwrought student has all the month of April to recruit himself before entering again on the studies of the summer session. Few students take more than two summer classes at once, and, surely, this, with a whole holiday on Saturday, might be considered moderate enough work even for Mr. Orchard's practitioner of the future, delicate as his adolescent years are allowed to be.

What sort of students, mentally or physically, must Mr. Orchard's experience have acquainted him with? Surely, of a very limited capacity in the former respect, considering the scheme of education he proposes as suitable to their powers! Let me speak on this matter from my own experience. As a young man beginning my studies I had abilities no worse perhaps, but certainly no better, than the majority of ordinary medical students. At seventeen I began my medical education, and with the knowledge gained at an English public school and some subsequent private tuition I passed at once the five compulsory subjects of the preliminary examination (English, Latin, arithmetic, mathematics, and mechanics), and took up in addition French and natural philosophy, gaining honours in the same. To these I subsequently added logic. What I did as a lad is done by scores, I might almost say hundreds, of the young men who yearly commence their medical studies. With an amount of work certainly not prejudicial to my health, and with a liberal allowance of out-door sports and social amusements, I qualified doubly a few months after I became of age. The year following I took two university degrees and a high place in the open competition for the department of the public service to which I now belong. I mention these facts simply to show that an ordinarily constituted young man with average abilities can go through his professional studies, even to the length of knowing something of such useless subjects (in Mr. Orchard's opinion) as chemistry, botany, materia medica, and other "medical rubbish," without any sort of injury or even risk to his health. For one student who deranges himself from over-study, I venture to think there are a considerable number who during their college days damage their health over less reputable causes.

Mr. Orchard's method of disposing of materia medica education is characteristic of the whole of his proposed reforms. He says, "No one thinks now of preparing his own drugs, and, if he did, he has nothing more to do than to turn up a book on the subject and he will find all the information he requires." Probably of all departments of medical practice, the one most fraught with danger to the public is an imperfect knowledge of practical pharmacy; and yet, in this matter of such importance to the large mass of country practitioners, the practically educated doctor of the future is to be dependent at once on a reference to the "appalling" text-book! Is this a specimen of the practical education advocated?

It is of no importance, in Mr. Orchard's opinion, that the practitioner should know that opium is prepared from papaver somniferum. As a student his teacher of medicine and surgery explained to him all that was necessary in mentioning the "doses, actions, and diseases" when used. If, therefore, this practically educated man confound opium and aloes or the sulphates of zinc and magnesia, it is immaterial, being only "theory and other useless matter," the study of which should have been avoided in his student days. His patients and the public generally might attach more importance to these trifles.

Before I had been qualified three years I had to give evidence in medico-legal cases in which the general evidence hinged almost entirely on the chemical and microscopic evidence. Medical jurisprudence is one of the superfluous subjects on which the student should not specially devote his energies, as no standard of proficiency will be exacted of him in Mr. Orchard's scheme. When a man's life, perchance, hangs on the evidence of a medical expert it is a matter of indifference, according to this view, whether that evidence should be based on a scientific knowledge of this subject or not. The prisoner, judge and legal fraternity generally, might also regard this from a different point of view.

Chemistry being another of the superfluous studies, Mr. Orchard's ideal practitioner would be well qualified to pass an opinion on the quality of drinking waters, adulteration of food and drinks, as well as in strictly toxicological procedures.

For fear that the mental fibre of his student should yield before the already reduced curriculum, Mr. Orchard would do away with the preliminary examination in mathematics, algebra, and mechanics, substituting a schoolmaster's certificate in its place. I would ask what class of schoolmaster and on what grounds? A mere knowledge of the alphabet of these subjects might then be enough. On this principle a lad whose pedagogue could testify that he knew the square of $(a + b)$; the difference between a lever of the first and second order and rule of three, and with having successfully "stuck" at the "pons asinorum" would become a certified scholar in mathematics, arithmetic, and mechanics.

Of course, Mr. Orchard would scout the study of such a subject as natural philosophy, as being amongst the "theory and other useless matter" class, which he deals with so summarily. Yet I would ask, How is the strictly practical doctor, even on his own showing, to deduce practical conclusions from what he hears with his stethoscope, unless he is acquainted with the acoustic principles on which the pulmonary sounds depend? How could he supply his hypermetropic or myopic patient with the glasses suitable to these conditions without a knowledge of the optical conditions on which sight and its derangements depend?

As far as I can deduce from a perusal of these two articles, Mr. Orchard's scheme of medical education, if carried into effect, would simply degrade the medical from its position among the learned professions, and reduce its members to a condition little removed from that of illiterate empirics.

Ignorant of mathematics, natural philosophy, English, logic, modern languages, and with a mere smattering of the classical tongues, the future student would be well qualified to enter on his professional studies, shorn of chemistry, botany, zoology, materia medica, and forensic medicine, and after passing the most insignificant tests in the remaining "practical" subjects, of entering into professional life nothing more than a trained "bone-setter," and without the education of a good apothecary. In an age of progress, such as this, what a state of matters to wish to institute for one of the most progressive of scientific professions! In this age of telephones, stored electricity, and all the wonders of modern research, Mr. Orchard would put back the hand of time, and bring our future students into the same educational position as their great grandfathers' blood-letters.

In conclusion, let me beg Mr. Orchard to try to realise that a medical man should be not merely an automatically skilled expert, but a man with a knowledge of things sufficient to enable him to do nothing professionally without a scientific reason, and, finally, that he should be one whose studies enable him to take the doctor's proper place in society—viz., that of an educated gentleman.

I am, Sir, yours truly,

Bengal, Aug. 1881. E. S. B.

[1] THE LANCET, July 9th, 1881.

CLASSIFICATION OF FEVERS.

To the Editor of THE LANCET.

SIR,—The remarks in a late number of THE LANCET, on the classification of diseases, under the head of Remittent or of Typhoid Fever, in the review of Dr. Flint's Practice of Physic, forcibly call to my recollection certain difficulties under which the medical officers of the Madras Presidency suffered in 1878, and preceding years.

Under the most favourable circumstances, giving an acceptable name to a complicated case of tropical fever is not an easy matter, whether the individual to be pleased is the medical practitioner himself or his superior officer, who may or may not differ from him as to the etiology of the disease in question.

I think it but just to the department in general, more particularly to my brother officers who lately resided in the Madras Presidency and to myself, to state, though late in the day, that when I left Secunderabad in November, 1878, time expired, and almost blind of an eye from exposure to the terrible heat of the previous hot weather, I brought home with me, *pro bono publico*, the intestines of three of my fatal cases of fever—of that fever which was the bone of contention between the executive medical officers and their professional and administrative chief. Without a word of explanation, and without furnishing him with any data upon which to ground his judgment other than the specimens themselves, I submitted my preparations to Dr. William Aitken, F.R.S., Professor of Pathology at Netley, praying him to be good enough to give me his opinion of the lesions which they represented. His answer was: "The specimens you forwarded were very good and very characteristic of typhoid fever." He also named the stage of the fever represented in each case. These preparations are, I believe, preserved in the museum at Netley.

I mention this matter to give prominence to the fact that the distinction between unmistakable typhoid fever and any other fever under any other name was very well understood by the medical officers serving in India, and that though Dr. Flint has maintained the distinction between remittent fever and the "typho-malarial," yet the same fact is an old story with us. It is an old difficulty as well as an old truth; for as my thoughts go back over old cases, particularly some of those occurring in Buhampore in 1868, in Secunderabad in 1874, and in Wellington in 1875, I am now greatly inclined to put down as typhoid, or typho-malarial, cases which at the time were regarded by me as examples of remittent, with more or less hepatic and bowel derangement, though there were others of my professional brethren who knew better, and who told me so.

The reviewer of the work never wrote a truer word than that "a thorough and exhaustive analysis of 'remittent fever' is certainly to be desired." But what is to be the foundation of the classification? I honestly confess that the naming of the tropical fevers is the point upon which my mind is in a condition of chaos. I should be very much obliged to anyone who would give a single and definite name to some of the cases of fever which I treated in Secunderabad in 1878, from an inspection of their temperature charts in my possession and in the regimental records of the 12th Royal Lancers.—I am, Sir, yours, &c.,

JOHN E. PURDON, M.B.,
Station Hospital, Guernsey. Surgeon-Major, A.M.D.

"MEDICAL MEN AND THE INCREASE OF HOSPITALS."

To the Editor of THE LANCET.

SIR,—I do not know when I have read any letter which has afforded me more complete satisfaction than the one signed "Veritas" with the above heading, which appeared in your last week's issue. Every word, every line, I feel and know to be true, and its publication just now is most opportune, seeing that in the course of a few days the youthful aspirants who have selected medicine as their profession, together with their fathers, will be treated to the customary twaddle as to the grandeur and nobleness of the pursuit they are entering on. Let me relate my own experience. I have resided in this locality hard on forty years. When I first came to live here, the only medical charities within half a mile were the Middlesex and Charing-cross Hospitals, and the King-street, Regent-street, and Gerrard-street (Soho) Dispensaries. All four of these institutions, but notably the two dispensaries, are everlastingly clamorous for funds. During the last twenty to twenty-five years we have had established the Women's Hospital, and the Hospital for Diseases of the Heart and Paralysis in Soho-square, that for Fistula, &c., in Berners-street, for Diseases of the Throat in Golden-square, for Diseases of the Skin in Poland-street, for the Ear in Greek-street, the French Hospital in Leicester-square, the Lock Hospital in Dean-street. Now, Sir, I can afford to state that each of these establishments has helped to diminish my professional gains. At one time, now some years ago, a fair sprinkling of the gentler sex consulted me; the grandiose proportions and spurious appearance of the Women's Hospital have spirited all these away. As to the other establishments, I may not be able to trace so distinctly a depreciation of my income, but here I may be allowed to state that it now seldom happens that I get a chance of looking into anybody's throat, or of inspecting a fistula, or a case of diseased heart, or paralysis, or skin disease, or ear or eye affections, or indeed anything at all. That I am not specially unfortunate in these particulars is shown when I tell you that being fairly well known I generally have a chat with my professional neighbours when I chance to meet them; latterly—*id est*, during the last twelve to fifteen years—their complaint has been uniformly the same, "that they have but little to do," and they cannot understand the reason why. They must be dull indeed if they fail to see it now. Your correspondent advises that general practitioners should never call in as a consultant anyone who is connected with voluntary and notably special hospitals. If I thought there existed sufficient unanimity in the profession to carry out any concerted scheme, old as I am, I would cheerfully act as honorary secretary to such an association pending some such public action, into which we shall be drawn some day.

I am, Sir, yours obediently,

Sept. 18th, 1881. H. S. OF SOHO.

A CASE OF RECOVERY AFTER LONG IMMERSION.

To the Editor of THE LANCET.

SIR,—I was called to J. P——, on the 11th August, at 6.30. P.M., and was shortly followed by Dr. Frain. I was told that it was a case of drowning. I found respiration established, but very imperfectly; the pulse thready and irregular. There were lacerations about the ears and temples, and well-marked symptoms of concussion. We applied hot bottles and blankets and the usual remedies, under which treatment he gradually, but perceptibly, improved. At 9 P.M. he became restless, so much so as to require slight restraint; but remained quite insensible. He continued in this condition until two o'clock the following morning, when he manifested signs of returning consciousness, which, however, were very transitory. He was sufficiently improved at 10 A.M. on the 12th to bear removal to lodgings which had been procured for him at a short distance. Up to this time he was in the police-office close to the river's bank. At 8 P.M. he became quite conscious, but could remember nothing of what had occurred—not even the capsizing of the boat. This was succeeded by severe muscular pains about the chest, with pleurisy and crepitant râles at the bases of both lungs, as well as ecchymoses on various parts of the body, but especially on the chest. He gradually recovered, and was sufficiently well to undertake a journey of over 200 miles on the 1st September.

The interesting feature of this case is that the man was entirely under water, with the exception of his left hand and part of the forearm, twelve to fifteen minutes, and held in this position, his head and chest being tightly jammed against a wall, by the weights which had fallen upon him and capsized his boat. His recovery can only be attributed to the mechanical pressure on his chest and the concussion interfering with respiration and thus preventing his lungs being filled with water. There is no fallacy about the time of his immersion, as I have carefully investigated the matter; and the machinery necessary for removing the weights and extricating him from his perilous position required this length of time to be got in order.

Yours truly,

CHARLES POPE, L.R.C.S. & L.R.C.P.
Frederick-street, South Shields, Sept. 13th, 1881.

"PRESERVED VEGETABLES AGAIN."

To the Editor of THE LANCET.

SIR,—When some time ago public attention was forcibly drawn to the occasional injurious effects of preserved "canned" goods, I undertook a lengthy series of chemical and physiological experiments to ascertain the cause of such poisonous action. The results having so far only been communicated to professional chemists (*The Analyst*, vol. v., No. 57), I hope you will allow me, by way of affirmation of the paragraph in THE LANCET of Sept. 24th, to give a short summary of them in the columns of your journal, as I think they may be of interest, and of some degree of importance, to medical readers.

Very frequently the gastric disturbances traceable to the consumption of preserved articles of food have been assigned to traces of lead dissolved from the solder with which the tins are closed, or present as impurity in the metal with which the can is lined. Now, although the occasional though very rare presence of lead in such articles cannot be denied, the effects should be attributed to the *tin* itself. Tin, even perfectly pure, is far more readily attacked by food matters than is commonly supposed; it is to be found in comparatively large amounts in an overwhelming majority of canned goods, irrespective of the nature of the same. Acid fruits, such as peaches or cherries, corrode the tins to an appalling extent; but even meats, nay, condensed milk, dissolve and become contaminated with serious quantities of the metal.

I base my observations upon the examination of the following foods:—Vegetable: French asparagus, American asparagus, peas, tomatoes, peaches (three different brands), pine apple (two kinds), white and red cherries, and marmalade. Animal: Corned beef (five brands), ox cheek, ox tongue (three kinds), collared head, tripe, oysters, sardines in oil, salmon, salmon cutlets, lobster, shrimps, curried fowl (two kinds), boiled rabbit, boiled mutton, roast chicken, roast turkey, ox cheek soup, gravy soup, sausages, condensed milk (three brands).

With the exception of the sausages, the whole of the samples contained more or less tin, many to such an extent that abundant reactions could be obtained from two or three grammes of the vegetable substances; whilst of the animal foods one of the soups contained thirty-five milligrammes, one of the condensed milks eight milligrammes, and oysters forty-five milligrammes of tin to the pound.

Pure tin is readily attacked even by carbonic acid in solution, all samples of soda-water or of other aerated beverages which I have tested giving distinct *tin* reactions. Aerated beverages are generally stated to be liable to lead contamination, but seeing that lead does not enter into the composition of any of the pipes or vessels of the machines made by modern manufacturers, I do not doubt but that the black colouration produced by sulphuretted hydrogen in the beverage in question has usually been erroneously attributed to lead, and is in reality due to tin. Tin, in fact, prevents the lead passing into solution; it completely precipitates the metal from lead solutions, an equivalent quantity of tin being taken up.

The question arises, Is tin, when taken into the system, injurious to health or not? Forensic literature does not furnish a positive or satisfactory reply, but the following experiments appear to me completely to settle the point.

A half-grown guinea-pig took with its ordinary food seventy-five milligrammes of pure *stannous* hydrate in two doses of twenty-five and fifty milligrammes each. Death resulted under symptoms of irritant poisoning. Tin was detected in large amount in the fæces and in the viscera, notably the liver.

Another similar animal took within three days, in six doses, 450 milligrammes of *stannic* hydrate, *without* serious effect, tin appearing abundantly in the excrements. Accustomed in a manner to stannic salts, it quickly succumbed to fifty milligrammes of stannous hydrate.

It plainly follows that while stannic compounds are not injurious in the doses given, tin in the stannous condition is a virulent irritant poison.

These experiments lead me most strongly to support your demand for a better method of packing preserved food matters than in tin canisters. Tin invariably dissolves in the stannous condition in such solvents as occur in vegetable or animal substances, and the amount of oxygen in the sealed canisters being very minute, oxidation cannot render the metal comparatively unobjectionable.

I trust that the medical profession will object, unmistakably and strongly, to the administration of tin by grocers and oilmen to young and old alike, and, whilst acknowledging the enormous benefits conferred upon the masses by the introduction of preserved foods, will insist that the present system of packing be speedily abandoned.

I am, Sir, yours obediently,

OTTO HEHNER, F.I.C., F.C.S.,
Billiter-square, E.C., Sept. 24th, 1881. Public Analyst.

GRATUITOUS MEDICAL SERVICES IN HOSPITALS.

To the Editor of THE LANCET.

SIR,—I would like to enlist your interest in a matter which is very much agitating the minds of medical men here just now—viz., gratuitous medical services in rate-supported hospitals. The corporation of this town has nearly completed a hospital for infectious diseases, and the committee proposed to the council the appointment of a salaried non-resident for the present, as only thirty-four beds are being provided (there is room for sixty-eight), a resident to be got when the beds became filled and one was required. The Mayor has actively opposed the committee, and wants an *honorary* staff with a resident. The members of the medical profession think the proposal to have gratuitous attendance very wrong. There will be no paupers in the hospital; it is not a charity; the law provides for a salary. Why, then, should medical men give their services for nothing? There would even be a stronger claim for gratuitous services in workhouses. I doubt even if the public will be gratified by the proposal. Patients will go to the hospital by virtue of the same right by which they use the museum or the public parks; yet they will have to receive medical attendance as a charity. Nowhere is the result of unlimited medical charity more pernicious than here; but a proposal is made to establish a new branch of charity in a most uncalled-for way—a way which will be injurious alike to the public and to the profession. I think you will agree with me that the attempt to induce medical men to attend such a hospital gratuitously is most improper, and think it is time a decided stand be made to check the system of indiscriminate medical charity. For if in our infirmaries we have unfitting cases *claiming* relief, here we have charity forced on every patient alike, not one of the patients being in a position to claim it, and many of them no doubt well able to pay. I trust you will see your way to raising your voice against this most unwise proposal. Although so many medical men view the proposal as a very improper one, still there are to be found medical men who might be induced to take the post.—Faithfully yours,

T. WHITESIDE HIME, M.B., &c.
Leavy Greave House, Sheffield, Sept. 26th, 1881.

HYDROPHOBIA IN MIDDLESEX.

To the Editor of THE LANCET.

SIR,—I was lately called to see a case of hydrophobia at Pinner, and I saw the patient on three days. My object in writing to you is not to refer to the medical aspect of the case, but to the legal one; and to point out some inconsistency in our laws. The late Mr. C—— allowed a pet fox-terrier dog to play with and mumble his ear, when he suddenly snapped it. As the poison of hydrophobia, like that of small-pox and some other diseases, can only be derived from a former case, I was anxious to know where the dog became poisoned. I therefore consulted with the veterinary surgeon who attended the dog, and he said: "The dog certainly died mad in about a week; also the other two dogs in the house. I do not know how the dog got rabies, but I am not at all surprised at it, because for the last five or six years they had never been free from mad dogs in the neighbourhood. Two days since I heard the peculiar cry of a mad dog, and was pleased to hear the report of a gun soon afterwards."

It thus appears that the laws permit experiments with the poison of hydrophobia to be made on men and animals for five or six years in a village within a few miles of London. And yet the law is so inconsistent that if I were to perform experiments on a dog, or on a frog, with the view

to find a cure for the disease, or to discover a vital law which might remove or prevent pain in animals as long as the world lasts, I should be branded as a cruel and immoral wretch, not by well-informed people, but by a small clique of feminine minds who are ignorant of the laws of living things, and who wish to continue in their ignorance; and, besides, I should subject myself to the operation of penal laws. Such a state of our laws is, in my opinion, a disgrace to the boasted intelligence of the nineteenth century.

I remain, Sir, yours truly,

ALFRED THOS. BRETT, M.D., &c.

Watford House, Herts, Aug. 29th, 1881.

P.S.—I was so impressed with the defective state of our laws, that in my anniversary presidential address in 1879 to the Hertfordshire Natural History Society I went somewhat out of my way to express my views on the subject, and as they are pertinent to my present letter, perhaps you will allow me to quote them:—"I should like to make a passing remark on what I consider some retrograde and ignorant legislation. I allude to the Act to amend the Act for Prevention of Cruelty to Animals, commonly called the Anti-Vivisection Act. This is often considered to be a doctor's question, but it concerns the public more than it does the medical profession. I can speak with impartiality because, although I have been a student of medicine for thirty-four years, I have never performed vivisection (except on the human subject), and I do not recollect seeing it done. Yet I can quite understand that to those who wish to extend the boundaries of knowledge it is an important means of research, and such students of nature should have every encouragement and help given them. For a knowledge of the laws of life is necessary for the treatment of disease, and if the public wish to keep the science of physiology imperfect, and succeed in their object, the treatment of disease will be more imperfect, more painful, more prolonged, and more expensive than it need be. As to cruelty, I do not believe it. Nothing is so cruel as ignorance, and those who wish to hug their ignorance of biology are the truly cruel. If the public knew their own interest, instead of listening to the blatant cry of a few amiable, but misguided sentimentalists, they would establish physiological laboratories in every large town in the kingdom. There are very few sciences that would be likely to yield such grand results as physiology, and to pay, not only in a pecuniary point of view, but in relieving human suffering as well as that of the animal kingdom for all future ages."—*Transactions of the Watford Natural History Society, vol. ii., p. 167.*

THE PORTABILITY OF DRUGS IN FIELD SERVICE.

To the Editor of THE LANCET.

SIR,—During the recent campaign in Afghanistan, I was struck with the importance of diminishing as far as possible the bulk of drugs for use in the field. I would urge the attention of wholesale chemists and others to the advantage which would result from compressing quinine, ipecacuanha, and other drugs. Quinine can be compressed into one-fourth its bulk, and even less by using higher pressure. Tablets of quinine would be a very easy way of preparing it, and they could be carried in boxes, and not in bottles. Every bottle carried in the field is but a new risk of the loss of its contents. I would like to see them reduced to a minimum, and all possible medicines packed dry in squares, like chocolate, for transport. We should copy the army, and have "medicine cartridges" as far as possible. Thus quinine pills could be sent out to the base of operations, or even made up there in cartridges of 100 or 1000 each, in tinfoil and cardboard or tin boxes. Astringent pills of acetate of lead and opium, a well-known formula, could be and should be prepared in 100 or 1000 cartridges, so that one could telegraph "Send me 5000 astringent pills, No. 12 formula, by field-post." Dover's powder, opium, calomel, tartar emetic, and a number of essential drugs all lend themselves to this cartridge treatment. On the side of an Afghanistan mountain a requisition is sent in to a field-hospital for drugs. The drugs I may have in plenty, but bottles for them are the difficulty. The medical stores in India issue quinine in 1 lb. units in bottles; but smaller quantities, 2 oz. units compressed and packed in tinfoil and cardboard boxes, or compressed to one-fourth in tin boxes as large as an ordinary match-box, would be very convenient, and easily lend themselves to separation.

I take it that a formulary of prescriptions for our army hospitals is absolutely essential. It need not be too elaborate, but should contain a very full list of pills and powders. These two modes of administering drugs will be always important in the field; and by having such formularies one could telegraph for the drug wanted, and get it by field-post, and not by the slower transport train. We want above all things to reduce compounding in the field. We want that work done as far as possible at the base. The carriage of chloroform will always necessitate bottles, unless some means can be found to invent a more portable anæsthetic. Chemists might well turn their attention to such a subject.

Water and rum are always with an army, and the dry component elements of mixtures should be issued in boxes ready for water to be added to produce a large bottle of the mixture needed. Rum can be used to make tinctures of certain drugs in the field. It always forms part of our commissariat supplies. Concentrated tinctures, needing only extra rum added, would also be of use in the field.

As regards the issuing of a definite formulary for use in army hospitals in the field or in quarters, we must remember that the system of issuing cartridges to infantry and artillery in the army is merely an attempt to simplify the supply of ammunition to the fighting men. Artillery officers, were they allowed, would be striving to modify the weight of the powder and the class of powder used. But necessity has forced the authorities to fix the weight and character of the powder used, and has left the experimental part to be done in times of peace. In like manner, we need a definite formula for war service in all the commoner prescriptions.

Thus it would be better to fix a formula for an astringent pill than run the risk of having no compounder on the spot to combine the opium and the lead. The sickness or death of a compounder in the field is a great loss, but we exaggerate the loss by not minimising the work needed of him. Again, in the field, medical officers and the medical staff are concentrated from scattered peace hospitals. I order a sick soldier a diaphoretic mixture, and I find the compounder does not use the mixture I have been accustomed to order. It is unfair to ask him to make up a separate mixture for every medical officer in a large hospital. We should agree on a fixed formula, and add any special drugs to that formula if so needed. The experience of officers gained in field service should be put on record for others. I know of no book which an army doctor can read to learn hints to make field service responsibility less onerous than it now is on the medical officers. There is certainly room for a paper on such an important subject.

The supply of drugs in the field, and particularly in the wars we fight in, in wild and uncivilised countries, where transport is so important an item, will always be an interesting subject. I think something might be gained by following the lines I have endeavoured to sketch out.

I remain, Sir, yours truly,

G. J. H. EVATT, A.M.D.,

Royal Military Academy, Woolwich, Sept. 1881. Surgeon-Major.

DUGAS' PATHOGNOMONIC SIGN OF DISLOCATION OF THE HUMERUS.

To the Editor of THE LANCET.

SIR,—Having had a case of dislocation (subcoracoid) of the humerus under my care a short time since, in which the above sign proved of great service, I wish to draw the attention of your readers to its value.

The patient was a strong, stout, healthy man, weighing 237 lb., and came by his injury through a violent fall sideways upon the inside of his right elbow. The shock was severe, but reaction soon occurred, and it was found impossible to reduce the dislocation in the usual way. There was some question as to the exact nature of the injury, for a feeling like that of crepitus could be obtained on examination, due either to effusion into or about the joint, or to relaxation and displacement of the tendon of the long head of the biceps muscle. This being the case, and there being also very little deformity and no increased mobility, the depression under the acromion corresponding with the glenoid cavity, and the presence of the head of the bone beneath the coracoid not being pronounced, on account of

obesity, I was led into error in supposing the case to be one of an injury very uncommon in adults—viz., fracture of the anatomical neck of the humerus. There was also a question as to the existence of dislocation complicated with fracture.

Dr. Briggs of Nashville, Tenn., Professor Darling of New York, and one or two other surgeons, however, who happened o be present, obliged me by their assistance and their advice, and set the matter at rest by the use of the method of diagnosis introduced by Dr. Dugas of Augusta, Georgia—viz., by bringing the hand of the injured arm across the chest to the opposite shoulder and showing that the elbow could not be approximated to the chest. This sign depends upon the fact that it is impossible for a straight line (the humerus) to touch the convexity of a curved line (the thorax) at more points than one at the same time. Its value was very apparent in this case on account of the condition and habit of the patient. He was placed under the influence of ether, and Dr. Briggs himself reduced the dislocation by the process of manipulation.

Dr. Robert Smith refers to the distinction between the two injuries of which I have spoken; and Mr. Bryant, in his new edition, notices this method of diagnosis, and acknowledges his obligation to Dr. Briggs for having called his attention to it.—I am, Sir, yours faithfully,

Liverpool, Sept. 1881. J. R. STOCKER, M.B., B.S. Lond.

MEDICAL DIPLOMAS.

To the Editor of THE LANCET.

SIR,—The enclosed letter was received by me a few days since, and it has occurred to me that the best redress I could obtain for the insulting proposition would be to have the same published in the columns of your valuable journal, for which you have so many subscribers here even on this side of the Mississippi.

I am, Sir, your most obedient servant,

P. GERVAIS ROBINSON, M.D.,
Dean of Mo. Med. Coll.

Missouri Medical College, St. Louis, Sept. 12th, 1881.

"DEAR DOCTOR,—I request you will kindly inform me on what conditions I could obtain *in absentiâ* a M.D. diploma. You can rely on my discretion; the cash will be forwarded beforehand. Waiting your reply,

"I remain, dear Doctor, yours faithfully,

"* * * * *, Aug. 27th, 1881." "* * * * * * *

PARIS.

(From our own Correspondent.)

IN spite of all the endeavours of the military authorities to keep matters quiet, the truth about the health of the troops in Algiers and Tunis is now known. Thanks to the antagonism between the medical departments of the army and the commissariat, hospital organisation has been completely paralysed, and the state of things is not unlike that which obtained during the Crimean war. In Tunis there is an epidemic of typhoid fever. The Hospital at Bone has two hundred cases, and the commissariat officers daily refuse admission to others for want of beds. Medical aid is also deficient, and an appeal for help to the civil practitioners of the country has just been made. If the *Tribune Médicale* is correct in its information, this appeal is probably the most astounding impertinence ever offered by any administration to the medical profession. The terms, as stated by this journal, are fifty francs (£2) a month, and the prospect of a hospital appointment later. Of several thousands who have received this brilliant offer five only are said to have responded; and it is highly probable that the War Department will have to elaborate more satisfactory conditions. In the first place, the relations between the medical and commissariat officers must be placed on another footing. As regards pay, the civilian surgeons will do well to recollect what the English authorities were obliged to give on an analogous occasion at the outbreak of the Zulu war. Those will be very foolish who allow themselves to be tempted by the promise of future honours. The tenour of such appointments is much too precarious in France; and the engagements of a dying Ministry are by no means sure of being honoured by that which will succeed it.

A report was prevalent a few days since that an English ship had put into Dunkirk with several cases of yellow fever on board. This turns out to be "Senegal," or "pernicious," fever, with typhoid symptoms.

A Commission appointed by the Faculty of Medicine to report upon the study and practice of dentistry in France makes known the result of its deliberations. It is proposed to create a special dental diploma, candidates for which would have to fulfil the following conditions: 1, To be at least twenty years of age; 2, to have passed a preliminary examination; 3, to have attended lectures for two years at a school of medicine on anatomy, physiology, medicine, and surgery; 4, to have attended the practice of a surgical service for one year; 5, to have studied two years either with a dentist or in a school of odontology. The examination for the diploma will consist of a theoretical, a clinical, and a practical test, the candidate being required to perform some dental operation, and to execute a piece of mechanical dentistry. If this project becomes law all dentists, whether French or foreign, who have practised less than ten years, will be required to qualify themselves by submitting to examination within three years.

At the Academy of Sciences M. de Lacerda states that he has found an antidote to the virus of the Bothrops in permanganate of potash. A solution of this salt injected hypodermically, after the venom of the serpent had been introduced beneath the skin, prevented the appearance of any local disturbance where the virus had been injected. When the antidote was not used swellings and abscesses always occurred. The same thing was observed when poison and antidote were injected into the veins.

THE GARRISON HOSPITAL AT METZ.

(From a Correspondent.)

A DESCRIPTION of the above hospital may be of interest to at least some of the readers of THE LANCET. I have to tender my sincere thanks to the military, and especially to the medical, authorities of the famous fortress, the capital of Lorraine, for the kindness shown to me, and also for the trouble taken in explaining everything of interest both in the hospital and in the newly-built cavalry barrack, constructed on the latest principles.

The garrison hospital at Metz, two-storeyed, stands close to the Moselle; it is built round, and completely encloses, a large open space, with trees and shrubs, on a well-kept lawn, divided into two gardens by a cross block, also two-storeyed, connecting the two wings. The accommodation is for 800 beds, though at present the patients number only about 200, out of a garrison of nearly 17,000. Detached are washhouses, a mortuary, and wards for small-pox, &c. The ground-floor is taken up by offices, kitchens, pharmacy, and immense magazines—never touched in peace time—containing complete stores and equipment to the smallest details for 3000 sick for three years, in view of a possible, many say, a probable siege; everything in the most marvellous order. On the first and second floors are the wards, large, lofty, and very roomy, each containing thirty-five to forty beds; floors of polished wood, walls painted to a height of about seven feet, above that distempered; ventilation by opposite windows, provided with curtains, opening quite to the ceiling, and where no windows exist, as at the ends, by ventilating shafts. Latrines are supplied with constantly running water. The sanitary arrangements seemed perfect. Since the Germans came into possession many improvements have been made. Hot and cold water has been laid on everywhere, and gas provided. Upon the iron bedsteads, standing well away from the wall, lies a wire mattress, with headpiece, allowing a free current of air underneath, and making by its springiness a most comfortable bed; upon it, again, a hair mattress in three pieces, sheets and blankets. Over the patient's head hangs a black board, giving his regiment, name, date of admission, diet, medicines, in white chalk. The foot of the bedsteads supports a long narrow ledge, used as a table by the surgeons and attendants for writing upon, &c. Near the head stands a small table, with cupboard for patient's food, necessaries, &c. On admission he is provided with blue-and-white-striped lined coat and trousers, slippers, shirt, and socks. The hospital is divided into three departments—a surgical, a medical, and a venereal "station," each presided over by a surgeon-major, assisted by one or two assistant-surgeons, the whole being under the surgeon-in-chief, who is responsible for all sanitary arrangements, and for discipline, he having the

power to inflict punishments on the hospital attendants—soldiers detached from the regiments in numbers as required,—who receives reports, inspects the wards, furnishes returns, passes all articles of food before they are permitted to be used, but who has nothing to do with the actual treatment of the sick. Once a week he presides over a meeting of all the surgeon-majors and surgeons in a large room, the walls of which support glass cases containing a medical library, pathological and osteological collections, &c. Here the different cases are talked over, consultations held, and anything of interest discussed; here, also, the attendants at other times are instructed in their work by the assistant-surgeons. No longer than one month is each ward permitted to be used, the patients then being transferred to an adjoining one, left unoccupied for the above period, and most thoroughly cleaned in every way. Of course the present small number of patients easily allows of this most valuable sanitary arrangement. Patients are admitted during the afternoon, being then sent in from the different barracks and forts by the assistant surgeons present with corps. Slight cases are treated in barrack rooms—up to nine days. The scale of diets seemed very liberal—that of convalescents almost too much so; different wines and beer are given freely, but no spirits. The venereal wards contained but very few and slight cases; mercurial inunctions, iodide of potassium, and hypodermic injections of corrosive sublimate are much used. The military hospital at Aix-la-Chapelle is for advanced cases. Of typhoid fever cases there were several, but separated from the other patients; they are always treated with cold baths, often five and six a day, no pectoral complication being considered an excuse, experience having shown that even these cases were greatly benefited by the bath. Temperature charts are strictly kept, almost every hour in severe cases, and directly the thermometer shows 104° the bath is called into requisition. Some of the patients shown to me had had sixty and seventy baths, and even more. A little port wine is given before and after, and quinine sometimes in very large doses instead of the bath for a short period. Hæmorrhage from the bowels furnishes the only contra-indication. The result of this treatment has been most favourable, the percentage of deaths not having reached 4 per 1000. Bronchitis, pneumonia, jaundice, &c., filled the other beds; the slightest sign of phthisis discharges the patient to his home. The surgical station contained chiefly accidents, more or less severe, the greater number being recruits, 5000 having joined the garrison only a few days before my visit. Operations are performed upon strict Listerian principles. Each medical officer during peace time has to provide himself with all necessary instruments; in war only are they furnished by Government. Sick prisoners are treated in their cells. Clothing is disinfected by high temperature. The present percentage of admissions and deaths compares most favourably with that of the French when they held Metz. What struck me most, besides the perfect cleanliness and general sanitary arrangements, were the advantages derived by all from the weekly consultations among the medical officers, the comfort and ventilation due to the wire mattresses, and the frequent change of wards to allow for cleaning and thorough airing. What seemed to me somewhat hard upon the medical officers was the obligatory purchase of all instruments necessary in the treatment of the sick.

On the newly-built cavalry barracks I remarked more the good likely to be derived from the following regulations: The men do not take their meals in their troop-rooms, but in halls specially set apart for the purpose; a warm bath is obligatory on each trooper once a month, each squadron taking its turn at the full-length baths; every soldier has a lock-up cupboard for his arms, accoutrements, and necessaries in his room; the men do not live over the stables.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Sept. 22nd:—

Wigan, Charles Arthur, Portishead, Somerset.

The following gentlemen also on the same day passed the Primary Professional Examination:—

James Rocheid Forrest, St. Bartholomew's Hospital; George Ernest Vivian, St. Thomas's Hospital; Samuel Whitten, Mercer's Hospital, Dublin.

[In last week's list of successful candidates at the Preliminary Examination in Arts, the name "E. J. Habbijan" was printed in mistake for E. Thos. Habbijam.]

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.

Phosphates in Nutrition, and the Mineral Theory of Consumption and Allied Diseases. By M. F. Anderson, L.R.C.P.Ed., M.R.C.S. pp. xxvi.—178.

BLACKWOOD & SONS, Edinburgh & London.

Elements of Agricultural Chemistry and Geology. By the late Prof. Johnston and Chas. E. Cameron, M.D. Twelfth Edition. pp. 510.

Introductory Text-book of Physical Geography. By the late David Page, LL.D., F.G.S. Tenth Edition, Revised and Enlarged by Charles Lapworth, F.G.S. &c. pp. 284. With Illustrations.

CHURCHILL, J. & A., London. TREAT, New York.

Photographic Illustrations of Skin Diseases. By Geo. A. Fox, A.M., M.D. Parts V. to XII. Forty-eight Coloured Plates taken from Life.

Health Resorts for Tropical Invalids in India, at Home, and Abroad. By W. J. Moore, L.R.C.P.Ed. &c. pp. 192.

Epilepsy and other Chronic Convulsive Diseases: their Causes, Symptoms, and Treatment. By W. R. Gowers, M.D. pp. 309.

HACHETTE & Co., London.

Technical Vocabulary—English-French—for Scientific, Technical, and Industrial Schools. By Dr. F. J. Wershoven. pp. 289.

LINDSAY & BLAKISTON, Philadelphia.

Transactions of the College of Physicians, Philadelphia. Third Series, Vol. V. pp. 121.

LIPPINCOTT, J. P., & Co., Philadelphia.

Atlas of Skin Diseases. By Louis A. Duhring, M.D. Part IX.

LONGMANS, GREEN, & Co., London.

A Treatise on Orthopædic Surgery. By J. Warrington Haward, F.R.C.S. pp. 167. With Illustrations.

LOW (SAMPSON), MARSTON, & Co., London.

General Index to Ziemssen's Cyclopædia of the Practice of Medicine. pp. 499.

PAUL (KEGAN) & Co., London.

Suicide: an Essay on Comparative Moral Statistics. By Henry Morselli, M.D. pp. 388.

PUTNAM'S SONS, New York. TRÜBNER & Co., London.

American Nervousness, its Causes and Consequences. By G. M. Beard, A.M., M.D. pp. 346.

ROBINSON, H. W., Walsall. SIMPKIN, MARSHALL, & Co., London.

The Ethics of Love. With a Preface by a leading Physician.

SMITH, ELDER, & Co., London.

Diseases of Women: a Manual for Students and Practitioners. By Arthur W. Edis, M.D. &c. pp. 541. With Illustrations.

WREDEN, F., Braunschweig.

Lehrbuch der Physikalischen Untersuchungsmethode innerer Krankheiten. Von Dr. Hermann Eichhorst. Theil II., mit 71 Abbildungen in Holzschnitt und einer Farbentafel.

Sixth Annual Edition of the Classified Directory to the Metropolitan Charities for 1881; by W. F. Howe. (Longmans.)—The Micrographic Dictionary, Parts II. & III. (Van Voorst.)—Die Medicinischen Geheimmittel; von Karl Schnekfer und Dr. F. Neumann.—Rendiconti Statistico delle Malattie Oculari.—The Action and Uses of Citrate of Caffein as a Diuretic; by Dr. D. J. Brakenridge.—A Propos du Railway Transsaharien; par Ch. J. Masse.—The Case of Susan Nixon, of Sydney.—Importance of the Early Recognition of Epilepsy; by Dr. E. C. Seguin.—Ethylene Bichloride as an Anæsthetic Agent.—Convulsions due to Depression of Spinal Reflex-Inhibitory Centres; by Dr. E. T. Reichert.—Annotazioni di Chirurgia Ortomorfica; pei Dottori G. Albertini e P. Panzeri.—Uterine Dilatation with a New Instrument; by Dr. H. P. C. Wilson, Baltimore.—Medical Communications of the Massachusetts Medical Society, Vol. XII.—L'Albume e lo Zuccheronelle Urine dei Catarattosi; comunicazione del Dr. G. B. Bono.—Virchow's Archiv.—Zeitschrift für Biologie; von M. v. Pettenkofer und C. Voit; XVII. Band. (Williams and Norgate.)—Fraser's Magazine, October.—Leisure Hour, Girl's Own Paper, Sunday at Home, Friendly Greetings.—Handbuch der Historisch-Geographischen Pathologie; von Dr. August Hirsch. (Verlag von F. Enke, Stuttgart.)—Da Développement du Typhus Exanthématique; par le Dr. S. Robinski.—Médecine Visible et Médecine Nouvelle; par le Dr. M. Semmola. (Baillière et Fils, Paris.)—Una Deliberazione del Consiglio Superiore della Pubblica Istruzione del Regno d'Italia sul libero Insegnamento della Medicina Omeopatica.—Inaugural Address delivered at the International Homœopathic Convention held in London, July, 1881; by Richard Hughes, L.R.C.P.Ed., President.—Health Lectures for the People, delivered in Manchester, 1880-81. Vol. IV. (Heywood.)

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

BROSTER, A. E., L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the Brassington District of the Ashbourne Union.

GREENE, A., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer to the Ennis Dispensary District.

GRIFFITH, G. R., M.B., C.M.Glas., has been appointed Medical Officer and Public Vaccinator for the Waenfawr District of the Carnarvon Union, vice Williams, resigned.

HEHNER, O., F.C.S., has been appointed Public Analyst for the County of Derby, vice Coyle, resigned.

LANE, J. E., M.R.C.S., has been appointed Demonstrator of Anatomy to St. Mary's Hospital Medical School.

LAWSON, T. C., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Fourth District of the Reigate Union.

LLOYD, D., M.R.C.S., has been appointed Assistant Medical Officer for the Infirmary and the Workhouse of St. Leonard's (Shoreditch) Parish, vice Payne, resigned.

ORMSBY, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the St. Mary's District of the Dover Union.

ORR, W. Y., M.B.Ed., M.R.C.S., has been appointed Assistant House-Surgeon to the Northern Hospital, Liverpool, vice W. R. Parker, B.A., M.B.Cantab., M.R.C.S., resigned.

PARKER, W. R., B.A., M.B.Cantab., M.R.C.S., has been appointed House-Physician to the Northern Hospital, Liverpool, vice C. H. B. Shears, M.R.C.S., L.R.C.P., resigned.

PHILLIPS, S., M.D., has been appointed Demonstrator of Anatomy to St. Mary's Hospital Medical School.

REYNOLDS, R., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer for the Fourth District of the Halsted Union.

SMAILES, F. W., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Pickering District and the Workhouse of the Pickering Union, vice Scholefield, deceased.

THOMPSON, T. W., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Second District of the Barnet Union.

WARD, G. S., L.R.C.P.Ed., L.R.C.S.Ed., L.S.A.Lond., has been appointed Medical Officer for the Fifth District of the Hertford Union.

WICKHAM, W., M.R.C.S., L.S.A.Lond., has been appointed Medical Superintendent to the Poplar Board of Works Small-pox Hospital, Plaistow, vice P. Thornton, resigned.

WORRALL, R., M.D.Q.U.I., M.Ch., has been appointed Assistant Medical Officer to the Walton Workhouse, West Derby Union, vice O'Connor, resigned.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On the 21st ult., at 184, Aldersgate-street, E.C., the wife of John Adams, L.R.C.P.Lond., of a daughter.

BRANDER.—On the 19th August, at Ranchee, Bengal, the wife of Surgeon E. S. Brander, M.B., of a son.

CLOTHIER.—On the 25th ult., at North-road, Highgate, London, the wife of Henry Clothier, M.D.Lond., of a son.

GROSS.—On the 24th ult., at Westmoreland-road, Walworth, the wife of Charles Gross, L.R.C.P.Lond., Medical Superintendent of St. Saviour's Infirmary, of a daughter (still-born).

HOFFMEISTER.—On the 15th ult., at 8, Cumbridge-road, Brighton, the wife of Dr. J. B. Hoffmeister, of a son.

PARKER.—On the 15th ult., at Haverig House, Gosforth, Cumberland, the wife of Charles A. Parker, M.D., of a son.

TURTLE.—On the 19th ult., at High-street, Homerton, the wife of James H. Turtle, M.D., of a son.

MARRIAGES.

AITKEN—BOUCH.—On the 21st ult., at St. George's, Hanover-square, Lauchlan Aitken, M.D., of Rome, to Fanny, elder daughter of the late Sir Thomas Bouch, C.E.

JAMES—HARDWICKE.—On the 27th ult., at St. Stephen's, Tonbridge, W. Dale James, Surgeon, of Sheffield (son of Rev. Dr. James, of Birmingham), to Mary, daughter of Eugene Hardwicke, Esq., of Tonbridge.

MARSHALL—SMYTHIES.—On the 24th ult., at Hathern Church, Leicestershire, Lewis Walter Marshall, M.D., of Nottingham, to Frances Elizabeth Ethel, youngest daughter of the Rev. E. Smythies, Rector of Hathern, and Rural Dean.

SMITH—BANKHEAD.—On the 22nd ult., at the Dalswinton Barony Church, by the Rev. MAXWELL HUTCHISON, B.D., Minister of the Parish, James A. J. Smith, Surgeon-Major late Cape Mounted Riflemen, to Mary, daughter of the late James Mitchell Bankhead, of Dalswinton, Dumfries.

DEATHS.

BATTYE.—On the 22rd ult., at his residence, St. George's-road, S.W., Richard Fawcett Battye, M.R.C.P.Ed., M.R.C.S., in his 61st year.

BOULTON.—On the 21st ult., at Horncastle, Georgiana Caroline, the beloved wife of Albert E. Boulton, Surgeon, and daughter of the late Rev. William Williams, Vicar of Croft, Lincolnshire.

IRVING.—On the 20th ult., at Long Bennington, Lincolnshire, William Bell Irving, aged 70. Mr. Irving held the appointment of Union Surgeon for 43 consecutive years.

RAWBONE.—On the 19th ult., at Atholo House, Tooting Graveney, Surrey, George Rawbone, F.R.C.S., second son of the late Rev. John Rawbone, of Aylesbury, Bucks, in his 82rd year.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Local papers containing reports or news-paragraphs should be marked.

We cannot prescribe, or recommend practitioners.

Lectures, original articles, and reports should be written on one side only of the paper.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE MANIPULATION OF FROZEN MEAT.

MR. EDMUND T. DOXAT has drawn attention in *The Times* to the needlessness—and he might have added the mistake—of cooking meat which has been frozen for transport purposes immediately after it has left the refrigerator. As a matter of fact the quality of the flesh may be injured and premature decomposition induced if it be thawed too rapidly. It is important that it should be allowed to dry as it thaws, and we know how difficult it is to dry a frozen substance or fabric as it thaws, unless a strong current of air can be kept playing upon it. Mr. Doxat suggests wiping the meat as the frost gives out. This is a point of considerable practical moment, and those who are desirous of giving the Australian frozen meat a fair trial will do well to act on the advice tendered.

HOW TYPHOID FEVER IS SPREAD.

To the Editor of THE LANCET.

SIR,—Two or three days ago one of my inspectors, having occasion to visit a house in which there had been two consecutive cases of typhoid fever, found that the space under the roof, access to which was obtained through a trap-door, had been systematically used as a receptacle for the patient's foul linen. As this space also contained the uncovered cistern from which was drawn the drinking water of the family, the etiology of the second case seemed easy of explanation. The house I refer to is not a poor person's, but bears a rental of about £100 a year, and the tenant is a gentleman of position and education.

I am, Sir, yours, &c.,

Birkenhead, Sept. 27th, 1881. FRANCIS VACHER.

PUBLIC GYMNASIUMS IN PROVINCIAL TOWNS AND CITIES.

To the Editor of THE LANCET.

SIR,—Would you kindly allow the insertion of a few lines urging upon wealthy municipalities the importance and even the necessity of granting in perpetuity a small freehold site for the erection of every kind of "athletics," and thus afford to the citizens and townspeople—and even to visitors—a perpetual source of health-giving recreation. A few square yards of ground exclusively devoted to this admirable purpose would be well bestowed by every corporation.

I am, Sir, your obedient servant,

AUGUSTUS J. HARVEY, F.R.G.S.

Cromwell-terrace, South Town, Great Yarmouth, Sept. 16th, 1881.

"HAMMOND'S WIRE SPLINT."

To the Editor of THE LANCET.

SIR,—I reference to your review of Mr. Coleman's work (a manual of dental surgery), in which you call attention to an important error in the illustration of my splint, I should like to say that the only effectual manner of applying this splint to a case of fractured jaw is to construct it for each individual case, and on no account to use ready-made ones supplied by instrument makers.

Also that it is absolutely necessary to use a separate ligature of small wire for each tooth, as by no other method can the tightening by torsion alternately from side to side (on which so very much depends) be effected.

I am, Sir, yours truly,

Leinster-square, Kensington-gardens, W., Sept. 27th, 1881. GURNELL HAMMOND.

REMARKABLE ABSCESS-CONTENTS.

DR. HOWELL WHITE, of Fishkill, communicates to the *New York Medical Record* the report of a case in which a head of rye with half an inch of straw was discharged from an abscess in the chest. The patient, a lad aged seventeen, came under treatment for pleuritis, from which he appeared slowly to recover. About two months after the onset of the first symptoms he was attacked with scarlatina, on the subsidence of which a dull pain in the right side (the seat of the old pleuritis) was complained of. An abscess formed, which on being opened discharged what at first were thought to be spiculæ of bone, but which proved ultimately to be a head of rye with the above-named length of straw attached. The fragment was as perfect as when swallowed, four days before the pleuritis developed, and 100 days prior to its removal.

POOR-LAW APPOINTMENTS.

To the Editor of THE LANCET.

SIR,—I wish to draw your attention to what I think you will agree with me in terming a grievance. In a medical publication last Friday there was an advertisement from the guardians of the poor of Marylebone parish, requesting applications for the post of visiting medical officer to the workhouse. In common with I dare say several other medical men (having a belief in the good faith of guardians), I went to considerable trouble and some expense in sending in an application for this post, with testimonials, &c., and in trying to obtain interest to carry my election. While engaged in this latter work I learnt what I now wish to call your attention to—viz., that the whole affair was a "job;" that one of the parochial medical officers had resigned, and that a committee of three guardians had been appointed by the Board to appoint this gentleman to the vacant post. Now, I ask you, Sir, if such jobbery as this is in accordance with the intentions of the Local Government Board, and receives their sanction? And also if delusive advertisements such as this are to be paraded before the profession in order that medical men may be put to trouble and inconvenience only to be gulled in the way I have shown? It is high time that the vagaries of Boards of Guardians were put a stop to.—I am, Sir, faithfully yours,

Sept. 21st, 1881. "A HOODWINKED CANDIDATE."

P.S.—I may add that I was encouraged to apply by officials of the Board. I enclose my card.

A Constant Reader and *J. M. W.* have not enclosed their cards.

Stalwart.—We agree with the views advanced in our correspondent's letter.

Vox.—We regret we cannot give the information desired.

THE INSANE IN PRIVATE DWELLINGS.

To the Editor of THE LANCET.

SIR,—Being interested in the question raised in your columns by Dr. Gramshaw, of Lowestoft, relative to the private treatment of the insane, may I be permitted to add a few words of testimony as to the value of such a method.

I have had an opportunity of judging of the beneficial effects resulting from the adoption of such treatment. In the case to which I refer, and in which I was directly interested, confinement in an asylum was given a lengthened trial, but failed to effect a cure; indeed, on the contrary, the disease appeared to gain ground. But upon removal to private care, under the supervision of a medical man and with suitable attendants, the patient gradually improved, and was eventually restored.

From my observations in this case I was led to conclude that asylum life presented many obstacles to recovery. The constant association with sufferers from the same malady—the lack of social intercourse and amusement—the painful knowledge of the nature of the place of residence—and, above all, the monotony of an existence carried on under such circumstances, appeared to me to be adverse to the chances of restoration to health. On the other hand, the advantages of private treatment proved to be considerable. The friends of the patient had the comfort and satisfaction of knowing that he received the individual attention of the medical man in charge, and had about him well-chosen attendants, whilst they themselves had at all times ready access to the sufferer. Out-door exercise, too, was, under this arrangement, able to be indulged in to a far greater extent than had been possible at the asylum, and many social pleasures and amusements were enjoyed which assisted in preventing the patient from brooding continually over his own thoughts.

I do not doubt that there are cases in which this plan of treatment would require modification, and some for which confinement in an asylum is essential; but the latter I believe are far less common than is generally imagined. There can be no question that the condition of lunatics is improved greatly, and that asylums are conducted on far better principles than was the case half a century ago, and much is due to those who have helped to accomplish this; but much remains yet to be done, and I feel convinced that there are many who have friends or relations suffering from this painful form of disease who would join me heartily in wishing success to any efforts that may be made to bring about the much needed reform of the Lunacy Laws.

I am, Sir, your obedient servant,

London, Sept. 27th, 1881. A. F.

REMARKABLE ABNORMALITIES

To the Editor of THE LANCET.

SIR,—In making a post-mortem examination of the body of a male East Indian immigrant on the 8th ult. I observed the following abnormalities, which I think are worthy of record.

The right ventricle of the heart was very much thicker than the left, formed the apex of the heart, and from it the aorta had its origin. The left ventricle was comparatively thin, and gave off the pulmonary artery. In the abdomen the liver occupied the left hypochondrium, the spleen the right; the large end of the stomach was to the right, and the pyloric orifice to the left; the cæcum was in the left iliac region, while the sigmoid flexure of the colon was on the right side. The deceased, about forty years of age, was intemperate in his habits, and the immediate cause of death was alcoholism. I never saw the man during life, but was informed of his habits by those who had known him well.

I am, Sir, yours obediently,

W. A. MOSELEY, District Medical Officer.

Berbice, British Guiana, Sept. 2nd, 1881.

A SULPHURIC ACID DRINK.

To the Editor of THE LANCET.

SIR,—The following formula for a mixture for free use among workmen exposed to lead has, in my experience, answered a better purpose than any other drink:—Sulphate of magnesia, ten to thirty grains; dilute sulphuric acid, half to two minims; spirit of nitrous ether, one to four minims; water, half an ounce. To be taken every two or three hours while exposed to the lead.

This mixture was tried for six weeks under the personal supervision of the writer in a large lead smelting establishment in Leadville, Colorado, and during that time there was not a single fresh case of saturnine poison and no bad effect from the remedy was observed. Before its use the number of new cases was from one to twenty daily.

I am, Sir, yours truly,

W. A. JOHNSTON, M.D.

American Exchange, Strand, Sept. 20th, 1881.

A Constant Reader.—The Metropolitan Board of Works is the authority for registration of infant nurseries within the metropolis. We are not aware of any law enforcing such registration outside the metropolitan area.

Dr. Gordon Holmes.—We have no recollection of the paper mentioned.

SUNSTROKE.

To the Editor of THE LANCET.

SIR,—The criticism of my letter on the above subject by your correspondent Mr. Rogers Tillstone is quite unique. I will trouble you with a few words only in reply. If sunstroke is "shock" or "depressed nervous power," hot applications rather than cold ones are indicated as a general principle of treatment; and that its symptoms in general do point to this state of the system is the view that many now hold, and this is the simple point of my letter. It is evident that your correspondent has failed to see my purpose, and the question is by no means to be settled by the case which he records—or, indeed, by any individual or isolated case whatever—but rather on general principles which the pathology of sunstroke either has already or may hereafter dictate.

Does Mr. Tillstone think it necessary to teach me that every case of illness should be treated "on its own merits," or is it a discovery he himself has recently made? If the former, he is impertinent; if the latter, he is simply green, for none but dunces and quacks practise in this matter "by rule of thumb."—I remain, Sir, yours obediently,

King's Lynn, Sept. 1st, 1881. WILLIAM DALE.

MEDICAL REGISTRATION.

To the Editor of THE LANCET.

SIR,—Last mail brought me an unexpected notice that my name had been erased from the Medical Register and the number of your journal, in which a correspondent complains of exactly the same treatment. When I entered the public service the certificate of registration, together with others, was retained by the India Office. In a subsequent issue of the Medical Register my department was put after my name, and that finally implied that I should be a resident in India. During the last two years alone I have had changes numerous and extensive, including service in Afghanistan, and at various places in Bengal. May I inquire whether each of these changes should have been reported to the Medical Registrar? It is absurd to suppose so, and I maintain that when the Presidency of an Indian medical officer is recorded it is sufficient, and, indeed, all that is practicable. Like your correspondent from Leeds, I received no premonitory letter from the secretary, which is an essential preliminary to erasure, and as such the onus falls either on him for not sending it or on the Post-office for not delivering. When once a medical man has paid the proper fee to have his name and qualifications registered, it is unfair that he should be liable to this arbitrary erasure of his name without warning. In the case of Government medical officers abroad it is still more so, and I trust the General Medical Council will see their way to removing this unnecessary source of inconvenience.

I am, Sir, yours faithfully,

Bengal, Aug. 1881. E. S. B.

PARASITES IN FISH.

Mr. Thomas Toon (Leicester-square).—The conger is infested by twenty different species of internal worms, of which eight are nematodes. The species left at our office for identification is probably *Stelmius praecinctus*, but our correspondent does not state precisely the part of the body infested. No harm would result from swallowing the parasite.

HYPODERMIC INJECTION OF QUININE.

To the Editor of THE LANCET.

SIR,—The subcutaneous injection of quinine has been extensively adopted, and there can be no doubt that the plan has proved effectual in many hundreds of cases, especially when quinine could not have been otherwise introduced into the system. The hypodermic method has also lessened the expenditure of quinine, a matter of some consequence when the supply is scanty, and diminished the cost of the drug, a matter of perhaps more consequence in the opinion of pure financial department votaries.

I am, therefore, desirous that whatever little credit may be associated with the origination of the method may pertain to the right person, and that person is, I believe, myself. In proof of this statement I have to mention that the method of subcutaneous injection of quinine was first employed in 1862, in the European General Hospital, Bombay, to which I was then attached as resident or assistant surgeon. My experiments were the subject of a paper to the Bombay Medical and Physical Society, forwarded in March, 1863 (*vide* the journal of the Society for that year). The method was also brought forward in an article published in THE LANCET for August 1st, 1863. In that article I wrote, "Since the year 1858, when Dr. Wood brought forward the hypodermic injection of morphia, the plan has been extensively tried. Moreover, the results following the injection of morphia into the subcutaneous areolar tissue have on the whole been satisfactory, and the use of the alkaloid in this manner has now become an established practice in various obstinate painful disorders. Other agents, as atropine, have also been used hypodermically with varied success, and I have latterly employed a strong solution of quinine for the cure of intermittent and remittent fever by the method of subcutaneous injection. The success of this practice renders me desirous of calling attention to this novel method of using quinine."

The manner of injecting, the strength of and mode of preparing the solution of quinine, are then given, with various other particulars. Should any gentleman have published this practice of using quinine previous to the dates mentioned above I should be glad of such information, but, to the best of my belief, it was first placed before the profession in my articles quoted above, although sometimes attributed to more recent writers on the subject.—I am, Sir, yours, &c.,

W. J. MOORE,
Deputy Surgeon-General H.M. Forces,
Presidency Division, Bombay.

Bombay, Sept. 6th, 1881.

LUNATICS UNDER PRIVATE PROFESSIONAL CARE.

To the Editor of THE LANCET.

SIR,—I have had under my care five patients, all of whom were under certificates.

Mrs. D——, aged seventy, has been an inmate of my house for more than eight years. She lives with my family, and neither is nor has been under any restraint. She is devoted to the children, particularly to the youngest, and teaches them and mends their clothes. She plays whist and chess and round games; in fact, no inexperienced person would discover that she has a bee in her bonnet. It would be the greatest cruelty to place this lady in an asylum, or indeed to take her away from us.

M. W——, aged twenty-eight, a case of acute mania, was under my care in lodgings for three months, when he went home quite recovered.

G. F——, aged about thirty, a case of acute mania; so violent that I was obliged to transfer him to an asylum. He finally recovered.

A. B——, almost an idiot; had a second attack of mania. He remained under my care in lodgings for about six weeks, and returned home in his usual health.

H. H——, aged fifty; melancholia. I took him from a private asylum, of which he had been an inmate some months, and was much worse than on admission. I had him in lodgings at the seaside, and he returned home well in three months. This was four years ago. I believe he would have remained in the asylum to this day had not his friends insisted on a wiser course.

G. F—— was travelling with me on the Continent, suffering from extreme nervous irritation, and became suddenly maniacal. I have no doubt that had it not been for the enforced journey (such a one as I hope never to have to undertake again) it would have been possible to treat him in lodgings.

I believe that the very large majority of mental cases, acute and chronic, would be far better treated privately. H. H——, whose case I give above, will tell you very eloquently what he suffered in the asylum. The difficulty is the expense. Each case must be treated separately, so that a medical man can only, under the present state of the law, undertake one at a time. I should not for the sake of my chronic case like to take an acute case into my house; it would irritate and excite her immensely.—I remain, Sir, your obedient servant,

Bath, Sept. 4th, 1881. THOS. KITCHENER, M.D.

THE PROFESSION IN THE STATES.

THERE are in the United States, says the *Arkansaw Doctor*, 110 medical schools, having an annual attendance of 12,000 students, 3000 of whom are graduated every year.

OPERATION FOR THE CLOSURE OF SMALL ORIFICES IN THE PALATE.

To the Editor of THE LANCET.

SIR,—The following case, in which a small orifice in the palate leading into the antrum was readily closed, and with very little pain or discomfort to the patient, may be of interest to your readers.

A female, aged fifty-three, applied at the Dental Hospital on account of an opening into the antrum of oval form about one-third of an inch in the long and one-eighth of an inch in the short diameter, the result of an exfoliation of bone following the removal of a first upper molar tooth. Bearing in mind the plan suggested by my friend Mr. F. Mason for effecting the closure of such openings by the repeated application of nitric acid, I determined to try the effect of the actual cautery, as, in my opinion, less likely to cause loss of tissue than the acid. To this end I employed the thermal cautery at a black heat, or rather, I should say, directly the redness had disappeared. The effect was to cause a little blistering all round the orifice. The process was repeated three times at a period of a fortnight between each, and the orifice is now perfectly closed.

I am, Sir, yours, &c.,
Holly Lodge, Streatham, Sept 2nd, 1881. ALFRED COLEMAN.

Perplexity may refer to our Student's Number, published on Sept. 10th, 1881.

Mr. P. B. Hanson.—Some remarks on the subject will be found in an annotation in another column.

SMALL-POX IN SYDNEY, NEW SOUTH WALES.

To the Editor of THE LANCET.

SIR,—I saw an article in THE LANCET of Sept. 3rd on the above subject. I had the pleasure of being placed in quarantine in the same port for about three weeks for what was supposed to be the same cause.

The case in question (a Chinaman) was taken with a high fever, due to the heat and filthy condition he was in. When I saw him his temperature was 104°; no preliminary symptoms. The steamer now went down to Melbourne and back to Sydney. Here, on reporting the case, without any examination, we were placed in quarantine. The patient was never personally seen by the health officer. Two or three days after we had a doctor down, who pronounced it to be small-pox, even the slight marking having disappeared. (I must mention that this doctor received a guinea a day while the ship was in quarantine.) This cost the company a sum of about £50 per day.

Now, we had been over six weeks from Singapore, the only place where the crew could land, so it could not have been small-pox; secondly, with all that number of passengers (over 500) I had no other case of sickness whatever. I think you will come to the conclusion with me, that the Sydney idea of small-pox is rather vague.

I am, Sir, yours truly,
Sept. 8th, 1881. J. W.

Scotch Surgeon.—The offence to which the penalty is attached is that of falsely using a name, title, or description implying registration under the Medical Act.

Mr. Geo. Byron.—We have no recollection of the passage referred to.

FOREIGN BODY IN LARYNX.

To the Editor of THE LANCET.

SIR,—The following case may be deemed of sufficient interest for insertion in your pages.

On the 18th of last July I was hurriedly called to see a child aged fourteen months whom I was informed was choking. On my arrival the mother of the child informed me it was better, as she believed the substance which was lodged in its throat had passed into the stomach. On making inquiries I discovered that the child had been eating some muffins, a portion of which lodged in the throat. Taking it for granted what the mother said to be true, I discontinued visiting. However, about four weeks afterwards the mother brought the child to the surgery saying she thought it had croup. I examined it carefully, but could see nothing in its throat. The child was rather in a weak condition; the pulse was high; the breathing was at times natural (especially during the day), at others disturbed by a paroxysm of dyspnœa. I administered an emetic of compound ipecacuanha powder, and, to my astonishment, after taking the first powder, it vomited a substance which, on examination, turned out to be a brooch about one inch in length by half an inch in breadth. I may state that the child could swallow and eat soft food during the whole time the brooch was in the throat.

I am, Sir, yours, &c.,
Oldham, Sept. 27th, 1881. J. HAYES DANAHER.

*** Our correspondent forwards the brooch, which, in addition to its size, has sharp serrated edges.—ED. L.

Mr. Albert Hind.—We think our correspondent is well advised in deciding to bring the matter before the sanitary authority. We shall be glad to receive information of the result.

ERRATUM.—By a misprint in our issue of the 17th ult., Dr. Hunt, whose connexion with the General Hospital, Wolverhampton, has ceased, was described as House Physician instead of Honorary Physician.

COMMUNICATIONS not noticed in our present number shall receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Shea, Reading; Mr. Debenham, Prestcigne; Messrs. Stevens and Son, London; Mr. Barkas, New South Wales; Dr. Darling, Ballina Messrs. Arnold and Son, London; Dr. Douglas, Newbury; Dr. Jas. Williamson, London; Dr. Drummond, Newcastle-on-Tyne; Deputy Surgeon-General Moore; Dr. Gordon Holmes, London; Dr. Stocker, Liverpool; Mr. S. Macaulay, Newcastle; Dr. Holmes, Montana; Mr. S. Smith, Bristol; Mr. Beresford; Dr. England; Dr. Shepherd, London; Mr. Moseley, Berbice; Mr. Fisher, Swansea; Dr. Walker, Spondon; Mr. Batterfield, London; Professor Frankland, London; Mr. A. B. Kelly, London; Mr. Teevan, London; Dr. J. P. Walker, Mason City; Mr. Oliver Pemberton, Birmingham; Surgeon-Major O'Farrell, Limerick; Mr. Marsh, Newport; Mr. Clark, Moreton-in-Marsh; Mr. Brown, Westgate-on-Sea; Messrs. Brady and Martin; Messrs. Woolley and Co., Manchester; Dr. Ridge, Enfield; Dr. Johnston, London; Mr. Jefferies; Mr. Knox, Glasgow; Mrs. Bidwell, Buxton; Mr. Johnston, Scarborough; Mr. Taylor, Buxton; Mr. Hallibert, London; Dr. Gardner, Bungay; Messrs. Stevenson and Waters, Bournemouth; Mr. Reade; Mr. Danaher; Dr. Godson, London; Mr. Vacher, Birkenhead; Mr. Estcourt, Manchester; Mr. Hammond, London; Dr. T. W. Hime, Sheffield; Dr. Macewen, Glasgow; Surgeon-Major Hutton; Messrs. Struve and Co.; Mr. Roger Williams, London; Dr. Protheroe Smith, London; Messrs. Woods and Son, Manchester; Mr. J. Taylor, Buxton; E. Williamson, London; A. Jones, London; Aliquis Asylorum Expertus; E. S. B.; Palinurus; Medical Officer of Health; I. V. R. C.; Nemo; C. W. H., Tunstall; M.D., Leicester; Zeta; S. C.; A Friend of the Insane; A Hoodwinked Candidate; One of the Public; B. S. D.; Stalwart; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. King, Archiston; Dr. Murray, Leath; Messrs. Sheckland and Row, Kensington; Dr. MacCormac, London; Dr. Jacobi, New York; Mr. Maule, Faversham; Dr. Hoffmeister, Osborn; Messrs. Watkinson and Crust, Spalding; Mr. Thomas, Egerton, Australia; Dr. M'Lear; Dr. Jones, Neath; Mr. Ross, Twickenham; Messrs. Capes and Co., Manchester; Mrs. Jarvis, Paddington; Messrs. Deacon and Co., Peterborough; Mr. Roberts, Llanerchymedd; Mr. Waymond, Cambs; Mr. Webster, Merthyr Tydfil; Mr. Andrews, Wakefield; Mr. Morris, Campden; Mr. Hardwicke, Tunbridge; Mr. White, London; Mr. Crowther, Luddenden; Mr. James, Birchington-on-Sea; Mr. Tench, Wickhammarket; Mr. Irving, Long Bennington; Messrs. Beal and Co., Brighton; Dr. B. Squire, London; Mr. Jackson, Thornton Heath; Miss Cartwright, Sedgefield; Mrs. Taylor, Wymondham; Messrs. Harvey and Reynolds, Leeds; Mr. Chittenden, Belfast; Mrs. Bidwell, Buxton; Dr. Jones, South Kensington; Mr. Shone, Marlow; U. F.; Medicus, Chorlton; L.R.C.P., Chard; S. S. G.; Medicus C.; Medicus, Kew; Principal, Seaforth; Dispenser, Stafford; Medicus, Southwark; Alpha, Sherburn; Omega, Kentish-town; M. B., Stafford; Medicus Hall; G.; W. A. M.; M.D., Malda-vale; A. S., West Ham; Medicus, Newcastle-on-Tyne; J. A.; Registrar, Bath; Locum Tenens, Tintern; H. C., Bayswater; Medicus, Bournemouth; H. D., Bristol; Medicus, Old Kent-road; M.D., Leeds; &c., &c.

Sydney Morning Herald, Asylum Journal, The Leader (Melbourne), The American, Cambrian, Lincolnshire Chronicle, Manchester City News, Canterbury Press, Manchester Evening Mail, Berkshire Independent, Coffee Public-house News, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Sept. 29th, 1861.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia. in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sept. 23	29·90	N.E.	54	55	70	62	51	·16	Overcast
,, 24	30·19	S.E.	56	57	88	64	53	..	Cloudy
,, 25	30·00	N.E.	62	61	96	71	53	·05	Cloudy
,, 26	30·07	W.	58	56	85	66	49	..	Rainy
,, 27	30·18	W.	54	52	71	62	49	..	Overcast
,, 28	30·34	N.	53	50	71	62	47	..	Foggy
,, 29	30·29	E.	50	49	76	63	45	..	Foggy

Medical Diary for the ensuing Week.

Monday, Oct. 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
UNIVERSITY COLLEGE HOSPITAL.—Ophthalmic Department.—2 P.M., and on Tuesday, Thursday, and Friday, at the same hour.

Tuesday, Oct. 4.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Oct. 5.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.—Skin Department.—1.45 P.M., and on Saturday at 9.15 A.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown.—Mr. G. Ernest Herman, "On the Relation of Anteflexion of the Uterus to Dysmenorrhœa."

Thursday, Oct. 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, Oct. 7.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Oct. 8.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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